



## **SECOND QUARTER 2006**

# **QUARTERLY GROUNDWATER MONITORING REPORT**

**Sampled on May 16, 2006**

**Job # SP-110**

**LOP # 12509**

**Big Oil & Tire Co. – Blue Lake BP (Blue Lake 76)**

291 Blue Lake Boulevard  
Blue Lake, California 95525

June 30, 2006

This *Quarterly Groundwater Monitoring Report* was prepared for Big Oil & Tire Co. (BO&T) by SounPacific Staff using previous studies that were provided by Clearwater Group, Inc. (CGI) and file review conducted at Humboldt County Division of Environmental Health (HCDEH). Blue Lake 76 (the Site) is located at 291 Blue Lake Boulevard, Blue Lake, California (Figure 1).

### **SITE DESCRIPTION**

Site improvements include a single story building with an attached warehouse and three dispenser islands. The remained of the Site is paved with concrete and asphalt. The primary building is used as a mini-mart and the warehouse is used for storage. An apartment building is located adjacent to the north of the mini-mart. The main structures are on the northern property line with the entrance to the mini-mart facing south towards Blue Lake Boulevard (Figure 2).

There is currently one 12,000-gallon regular unleaded gasoline UST and one 12,000-gallon split-compartment UST containing premium unleaded gasoline and diesel fuel, which were installed on March 24, 2004 (Figure 2). Three 5,000-gallon underground storage tanks (USTs) that

contained regular unleaded gasoline, mid-grade unleaded gasoline, and diesel fuel, and a 2,000-gallon UST that contained premium unleaded gasoline were removed from the Site on March 19, 2004. Surface water runoff is controlled by drainage ditches and municipal storm sewers. All electrical and telephone lines are above ground (Figure 2).

### **SITE TOPOGRAPHY AND LAND USE**

The elevation of the Site is approximately 125 feet above mean sea level (amsl). The Site and surrounding properties slope gently in a south and southwesterly direction toward the Mad River, which is located approximately one (1) mile south of the Site. Surface water appears to drain in a southerly direction. Surrounding topography rises steeply to the north (Figure 1). The surrounding land use in the immediate vicinity is a mixture of commercial and residential. The Blue Lake Burger Barn resides adjacent and to the east of the Site. Blue Lake Boulevard borders the south side of the property line. Elgar's Apartments is adjacent to the west of the Site. Residential properties are located to the south of the property.

### **SITE HISTORY**

Previous studies overseen by CGI and SounPacific indicated the following historical information:

#### **1994 Product Line Repair (Beacom)**

On September 28, 1994, Paul Dalka of HCDEH observed Beacom Construction of Fortuna, California (Beacom) conduct repairs on the product line leading to the regular unleaded gasoline dispenser. This work was initiated in response to a loss of prime to the pump; however, a subsequent leak test indicated that a leak was present in the line. At that time, three (3) soil samples (BP Blue #1 to #3) were collected at depths between one and two feet bgs from an excavated trench adjacent to the product line (Figure 3). In excess of 450 parts per million (ppm) total petroleum hydrocarbons as gasoline (TPHg) were detected at all three sample locations (Table 1). No groundwater samples were collected.

### **1997 Subsurface Investigation (CGI)**

On March 27, 1997, CGI performed a subsurface investigation at the Site to provide an initial evaluation of the amount of petroleum hydrocarbons in the soil and groundwater adjacent to the USTs and associated piping. Four (4) direct push soil borings (B-1, B-2, MW-1, and MW-3) were initially installed onsite and then groundwater monitoring wells were installed in the locations of MW-1, and MW-3 (Figure 3). Monitoring well MW-2 was not installed during this event. Soil samples were collected from each boring and the results of the analyses indicated that the soil near the USTs and the southern dispenser island were impacted with TPHg (Table 1). In a letter dated January 8, 1998, HCDEH requested a Work Plan from BO&T to determine the extent of the petroleum hydrocarbon impact.

### **2000 Subsurface Investigation (SounPacific)**

On September 7, 2000, SounPacific performed a subsurface investigation at the Site in accordance with the approved CGI *Work Plan Addendum*, submitted October 20, 1998. The purpose of the investigation was to determine the extent of the petroleum hydrocarbon impact in the soil and groundwater near the USTs. Six (6) soil borings (B-3 through B-8) were drilled and soil samples were taken at five-foot intervals (Figure 3) (Table 1). Groundwater samples were also collected from each borehole (Table 2).

Laboratory analysis reported TPHg in excess of 1,000 ppm and benzene, toluene, total xylenes, and ethylbenzene (BTXE) in excess of 100 ppm in the soil of boring B-8, southwest of the southern dispenser island. Lower concentrations were reported in borings B-3 to B-5, located south of the USTs (Table 1). Impacted soil was primarily reported at a depth of ten (10) feet bgs. TPHg in excess of 500 parts per billion (ppb) and total petroleum hydrocarbons as diesel (TPHd) in excess of 200 ppb were detected in groundwater samples from borings B-3 and B-8 (Table 2). SounPacific recommended the installation of additional borings to further define the southern and eastern plume boundaries, and the installation of two additional monitoring wells in order to more accurately determine the groundwater flow direction and gradient. In a letter dated January 30, 2001, HCDEH concurred with SounPacific's recommendations and requested a Work Plan to

determine the extent of impacted groundwater at the Site.

### **2002 Subsurface Investigation (SounPacific)**

On May 14, 2002, SounPacific staff performed an additional subsurface investigation at Blue Lake 76, according to the guidelines as approved in the SounPacific *Subsurface Investigation Work Plan*, dated March 10, 2001. Five (5) soil borings were drilled (B-9 through B-13) (Figure 3) and soil and groundwater samples were collected. Soil analytical results indicated that the extent of soil impact within the vadose zone was generally limited to the Site (Table 1). Groundwater analytical results indicated that impacted groundwater extended offsite to the south across Blue Lake Boulevard. Boreholes B-10 through B-12 and domestic well DW-1, reported TPHg in excess of 2,500 ppb and TPHd in excess of 800 ppb (Table 2). Two (2) additional monitoring wells (MW-3 and MW-4) were installed and a groundwater monitoring program was initiated. At this time, SounPacific recommended further delineating the plume to the south. In a letter dated December 31, 2002, HCDEH concurred with this recommendation and requested a Work Plan to further delineate the soil and groundwater impact.

### **2004 UST Removal/Installation (Beacom)**

On March 19, 2004, Beacom removed four (4) USTs from the Blue Lake 76 site. SounPacific staff was onsite for portions of the excavation activity. The USTs were removed from two separate excavations, one (Main Pit) in the eastern portion of the Site that contained three USTs used to store unleaded gasoline, mid-grade gasoline, and diesel fuel, and an excavation in the central area of the Site (Super Pit) that contained the UST used to store premium gasoline. During the excavation activities monitoring well MW-1 was destroyed. Also, as described in the HCDEH approved *Excavation Work Plan*, dated December 11, 2003, additional excavation occurred to allow for the installation of a new UST system, and to remove identified impacted soil.

Following the removal of the USTs, seven (7) soil samples (1-North, 1-South, 2-South, 2-North, 3-South, 4-South, and 1-Sidewall) were collected from the sidewalls adjacent to the ends of the USTs. Laboratory analysis did not report any hydrocarbons above the method detection limits

(Table 1). Two (2) groundwater samples (Super Pit and Main Pit) were collected from the excavation pits. Laboratory analysis reported petroleum hydrocarbons in excess of 1,000 ppb in the Main Pit groundwater sample. Total lead concentrations were in excess of 3,000 ppb in the same Main Pit sample (Table 2).

After the UST system removal, during the period between March 20 through 24, 2004, Beacom removed additional soil from the “Main Pit” to allow for the installation of the new UST system and removed impacted soil that had been visually observed in the base of the excavation. No soil samples were collected at the vertical extent of the excavation as the excavation had to be backfilled immediately to preserve the integrity of onsite structures; however, possible free phase product was observed by Beacom personnel at a depth of approximately 12 feet bgs. Laboratory analysis of ten (10) soil samples from the stockpiled excavated material reported TPHg and TPHd, ranging from 10,000 to 100,000 ppm. At the lateral limits of the excavation, SounPacific collected seven (7) soil samples (BL 76 EX-1 through BL 76 EX-7). Analytical results of the two (2) soil samples (BL 76 EX-3 and BL 76 EX-4), both collected at ten feet bgs, from the northern extent of the excavation, indicated that further excavation was necessary to the north; however, excavation was impeded due to the presence of onsite structures. In addition, further excavation was necessary in the southwest portion of the excavation, in the vicinity of the two (2) soil samples (BL EX-5 and BL 76 EX-6), collected at eight feet and nine feet bgs respectively; however, excavation in this area was not possible because further excavation would have made the installation of the new USTs impossible due to the space requirements of the equipment used in the UST system installation. In addition, further excavation was not possible due to lack of additional onsite storage space for excavated soils. Approximately 1,000 tons of impacted soil was excavated and disposed of at an offsite licensed facility.

## **2004 Subsurface Investigation (SounPacific)**

During the period of May 24 through May 28, 2004, SounPacific staff performed a subsurface investigation at Blue Lake 76 to further define the hydrocarbon plume to the south of the Site. The investigation was performed in accordance with the approved *Subsurface Investigation Work Plan*, dated July 14, 2003, and the *Proposed Investigation (Figure 11) Second Revision*,

dated January 22, 2004. Eight (8) soil borings (B-14 through B-21) (Figure 3) were drilled and soil and groundwater samples were collected (Tables 1 and 2).

Laboratory analysis reported TPHg in excess of 1,000 ppm in soil collected from borings B-15 and B-21, which were located southwest and west of the previous southern dispenser island (Table 1). In excess of 1,700 ppb of petroleum hydrocarbons were reported in all groundwater samples, except from borings B-18 and B-19, which were located on a private residence to the south of the Site (Table 2). The May 2004 site investigation confirmed the presence of the groundwater impact, and determined that it had migrated at least 200 feet to the southwest, and on to adjacent properties on the south side of Blue Lake Boulevard. The full extent of the groundwater impact was not determined; therefore SounPacific recommended additional investigation to determine the full down gradient extent of the impact. To provide a complete evaluation of the extent of impacted groundwater, SounPacific also recommended installation of additional monitoring wells and implementation of a groundwater monitoring program. In a letter dated February 2, 2005, HCDEH concurred with the recommendations and requested a Work Plan to delineate the groundwater plume and move the Site towards remediation.

### **2006 Subsurface Investigation (SounPacific)**

Both borings and monitoring wells were installed at and around the Site in late May 2006. A Report of Findings is currently being prepared and will be submitted in due course.

## **RESULTS OF QUARTERLY SAMPLING**

A quarterly groundwater monitoring program was implemented by SounPacific on July 15, 2002. SounPacific is currently conducting quarterly groundwater sampling events to monitor hydrocarbon concentrations onsite, and collecting quarterly water level data to document any changes in groundwater levels and track any noticeable changes in groundwater flow direction gradient. Monitoring wells for this report were gauged and sampled on May 16, 2006.

## **MONITORING WELL STATUS**

<b>WELL</b>	<b>STATUS</b>	<b>MAINTENANCE / NOTES</b>
MW-1	DESTROYED	Destroyed during UST Removal
MW-2	ACTIVE	Muddy
MW-3	ACTIVE	Very slow recharge
MW-4	ACTIVE	Slow recharge
DW-1	INACTIVE	Discontinued domestic well sampling

## **FIELD DATA**

**Wells Gauged:** MW-2, MW-3, and MW- 4

**Groundwater:** Depth ranged from 8.60 to 10.77 feet below top of casing (btoc) (Table 3)  
Ranged from 113.30 to 116.31 feet amsl (Table 3)

**Floating Product:** Sheen detected in all wells

**Flow Direction:** SSW (Figure 4)

**Groundwater Gradient:** 0.08 feet per foot (ft/ft) (Figure 4)

On May 16, 2006, the depth to groundwater in the Site's three (3) monitoring wells ranged from 8.60 feet btoc in well MW-2 to 10.77 feet btoc in MW-4. When corrected to mean sea level, water level elevations ranged from 113.30 feet amsl in MW-4 to 116.31 feet amsl in MW-2. Groundwater levels for the May 16, 2006 monitoring event, along with historical level and elevations are included in Table 3. Groundwater flow direction was towards the south-southwest at a gradient of 0.08 feet per foot. The groundwater flow and gradient are graphically depicted on Figure 4. Prior to sampling, all wells were purged; the groundwater field purging parameters for each well are presented on the following page.

### **MONITORING WELL MW-2 GROUNDWATER FIELD PARAMETERS**

<b>Time</b>	<b>Total Vol. Removed/ gal</b>	<b>pH</b>	<b>Temp./ F</b>	<b>Cond./ ms(cm)<sup>-1</sup></b>
1:37 pm	0	5.45	58.65	0.122
1:46	1.6	5.51	57.70	0.116
1:52	3.2	5.86	57.68	0.136
1:55	4.8	5.80	57.66	0.130

### **MONITORING WELL MW-3 GROUNDWATER FIELD PARAMETERS**

<b>Time</b>	<b>Total Vol. Removed/ gal</b>	<b>pH</b>	<b>Temp./ F</b>	<b>Cond./ ms(cm)<sup>-1</sup></b>
2:45 pm	0	6.64	59.52	0.219
2:49	1.6	6.50	58.94	0.215
2:54	3.2	6.40	59.34	0.221
2:59	4.8	6.44	59.75	0.223

### **MONITORING WELL MW-4 GROUNDWATER FIELD PARAMETERS**

<b>Time</b>	<b>Total Vol. Removed/ gal</b>	<b>pH</b>	<b>Temp./ F</b>	<b>Cond./ ms(cm)<sup>-1</sup></b>
2:12 pm	0	6.19	60.52	0.611
2:17	1.4	6.31	60.48	0.572
2:24	2.8	6.41	60.43	0.590
2:29	4.2	6.41	60.86	0.626

## **ANALYTICAL RESULTS**

**Sampling Locations:** MW-2, MW-3, and MW-4

**Analyses Performed:** TPHg, BTXE, MTBE, DIPE, TAME, ETBE, TBA, TPHd, TPHmo

**Laboratories Used:** Basic Labs, Redding, California (ELAP Cert #1677)

On May 16, 2006, the three (3) monitoring wells MW-2, MW-3, and MW-4, were sampled for laboratory analysis following adequate well purging. The analytical results for the current monitoring event are presented on the following page and graphically depicted in Figure 5. The laboratory report is included as Appendix A. The historical analytical results for all monitoring wells, since the implementation of groundwater monitoring are included as Table 4.



	<u>MW-2</u> (ppb)	<u>MW-3</u> (ppb)	<u>MW-4</u> (ppb)
<b>TPHg:</b>	ND < 50.0	ND < 50.0	ND < 50.0
<b>Benzene:</b>	ND < 0.5	ND < 0.5	ND < 0.5
<b>Toluene:</b>	ND < 0.5	ND < 0.5	ND < 0.5
<b>Total Xylenes:</b>	ND < 1.0	ND < 1.0	ND < 1.0
<b>Ethylbenzene:</b>	ND < 0.5	ND < 0.5	ND < 0.5
<b>MTBE:</b>	ND < 1.0	ND < 1.0	<b>7.6</b>
<b>DIPE:</b>	ND < 0.5	ND < 0.5	ND < 0.5
<b>TAME:</b>	ND < 0.5	ND < 0.5	ND < 0.5
<b>ETBE:</b>	ND < 0.5	ND < 0.5	ND < 0.5
<b>TBA:</b>	ND < 50.0	ND < 50.0	ND < 50.0
<b>TPHd:</b>	ND < 50	ND < 50	<b>51</b>
<b>TPHmo:</b>	ND < 50	ND < 50	ND < 50

ND = Not Detected at the Laboratory Method Detection Limit

### **COMMENTS AND RECOMMENDATIONS**

On May 16, 2006, the second quarter 2006 groundwater monitoring event for the Site's three (3) existing monitoring wells was conducted at the Blue Lake 76 service station at 291 Blue Lake Boulevard in Blue Lake, California. A summary of the results are presented below.

- The depth to groundwater in the three (3) wells ranged between 8.60 feet btoc (MW-2) to 10.77 feet btoc (MW-4). When corrected to sea level, the water level elevation ranged from 113.30 feet amsl in MW-4 to 116.31 feet amsl in MW-2. Groundwater flow was towards the south-southwest at a gradient of 0.08 feet per foot (Figure 4).
- Groundwater samples from the three (3) wells were collected and analyzed for TPHg, BTXE, five-fuel oxygenates, TPHd, and TPHmo. No TPHg or BTXE were reported in any of the wells. Fuel oxygenate methyl tert-butyl ether (MTBE) was reported in well MW-4 at a concentration of 7.6 ppb, but was absent in wells MW-2 and MW-3. TPHd

was reported at a concentration of 51 ppb in well MW-4. Constituents not listed above were not detected at or above the laboratory method detection limits.

Based upon these results the following observations and conclusions have been made.

- TPHg was detected once in well MW-2 during the first quarter 2004 monitoring event. TPHg has never been reported in well MW-3. TPHg has not been detected in well MW-4 since the first quarter 2005. Although not sampled during the recent monitoring event, TPHg has been reported in well DW-1 during all ten of its sampling events, at concentrations greater than  $10^3$  ppb. The historical fluctuations of TPHg concentrations in the monitoring wells and domestic well are shown in Figures 6, 7, 8 and 9. TPHg does not appear to be a significant issue at the Site.
- BTXE has never been detected in wells MW-2 and MW-3. With the exception of low levels of total xylenes and ethylbenzene during the October 2004 event, BTXE compounds have not been reported in well MW-4 since the second quarter of 2003. In the disused domestic well, concentrations of BTXE have shown a general reduction over time. See Figures 6 through 10. BTXE does not appear to be a significant issue at the Site.
- MTBE was present in all wells at the Site until the first quarter 2005, when it was confined to wells MW-4 and DW-1, only. MTBE concentrations have decreased in well MW-4 since the previous quarter of monitoring, see Figures 6 through 10. MTBE appears to have migrated downgradient away from the Site.
- Although TAME has been reported on occasion, it does not appear to be an issue at the Site.
- TPHd was detected during five out of 16 sampling events in well MW-2. TPHd was detected once in well MW-3 during the well installation sampling event. In well MW-4 the concentrations of TPHd have been fairly consistent and have fluctuated over time.

The domestic well DW-1 has reported an average of 2,000 ppb of TPHd during nine out of ten sampling events. The historical fluctuations of TPHd concentrations over time for all wells are shown in Figures 6 through 10. It is unclear if the TPHd in the domestic well originated from the Site, based on the overall distribution of TPHd.

The following activities are in progress:

- New borings have been drilled and sampled. Eight (8) new monitoring wells have been installed on and around the Site.
- SounPacific is preparing a Report of Findings, which, if applicable, will be combined with a corrective action plan in an attempt to move forward on remediation of the identified hydrocarbon groundwater plume generated from the release from the onsite UST system.
- Groundwater monitoring will be reinitiated with the next quarterly monitoring event and will include the existing wells, all new wells, and the hand-dug domestic well (DW-1).

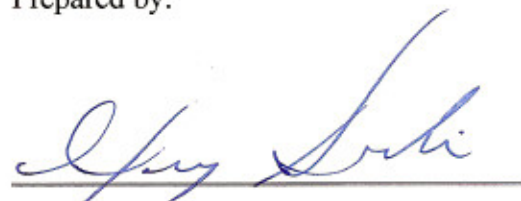
## CERTIFICATION

This report was prepared under the direct supervision of a California registered geologist at SounPacific. All information provided in this report including statements, conclusions and recommendations are based solely on field observations and analyses performed by a state-certified laboratory. SounPacific is not responsible for laboratory errors.

SounPacific promises to perform all its work in a manner that is used by members in similar professions working in the same geographic area. SounPacific will do whatever is reasonable to ensure that data collection is accurate. Please note however, that rain, buried utilities, and other factors can influence groundwater depths, directions and other factors beyond what SounPacific could reasonably determine.

### **SounPacific**

Prepared by:



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Principal Geologist



## **ATTACHMENTS**

### **FIGURES**

- Figure 1: Aerial / Topo Map
- Figure 2: Site Plan
- Figure 3: Sample Location Map
- Figure 4: Groundwater Gradient Map May 2006
- Figure 5: Groundwater Analytical Results
- Figure 6: MW-1 Hydrocarbon Concentrations vs. Time
- Figure 7: MW-2 Hydrocarbon Concentrations vs. Time
- Figure 8: MW-3 Hydrocarbon Concentrations vs. Time
- Figure 9: MW-4 Hydrocarbon Concentrations vs. Time
- Figure 10: DW-1 Hydrocarbon Concentrations vs. Time

### **TABLES & CHART**

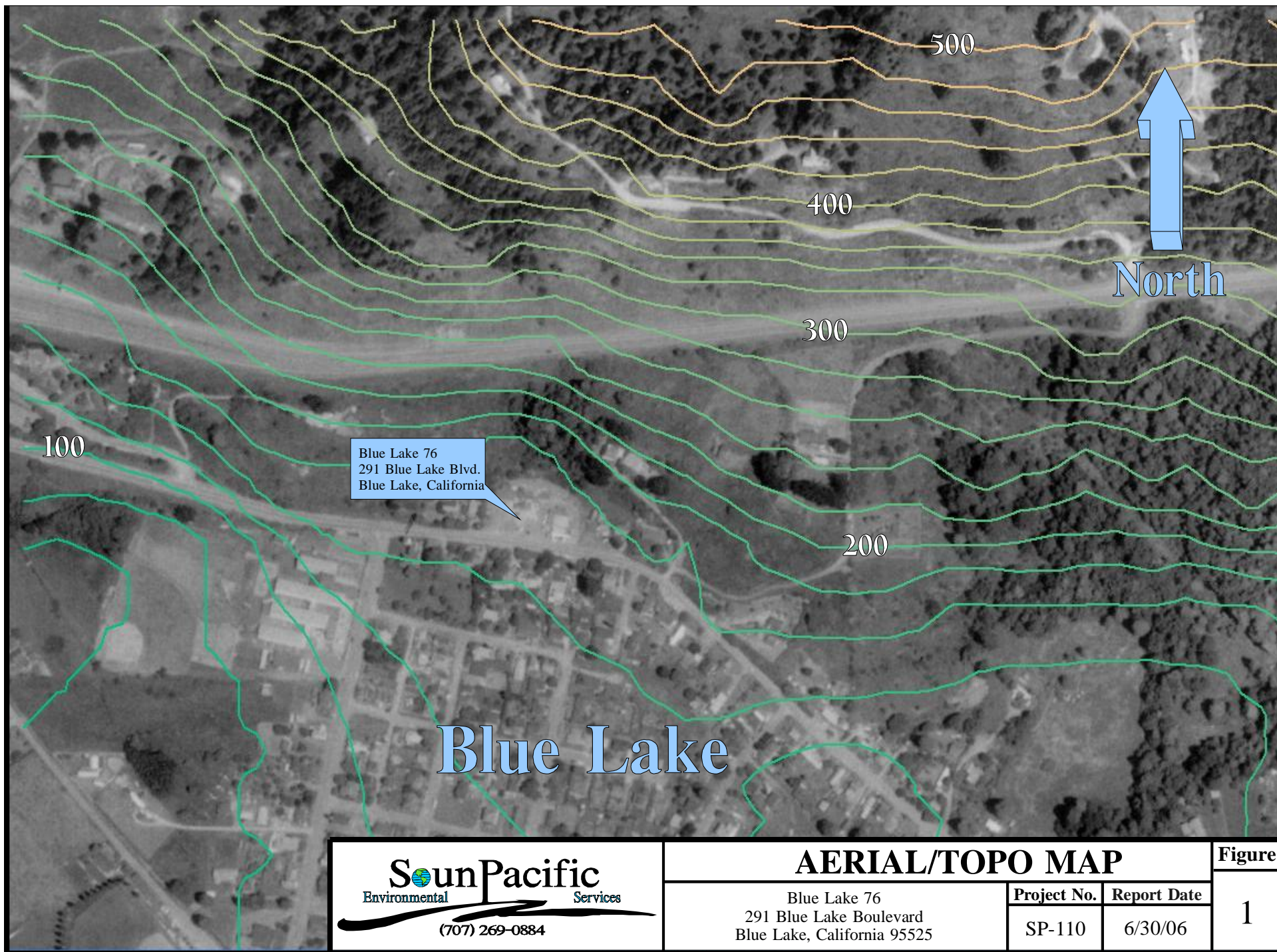
- Table 1: Soil Analytical Results
- Table 2: Groundwater Analytical Results from Boreholes
- Table 3: Water Levels
- Table 4: Groundwater Analytical Results from Monitoring Wells
- Chart 1: Hydrograph

### **APPENDICES**

- Appendix A: Laboratory Report and Chain-of-Custody Form
- Appendix B: Standard Operating Procedures
- Appendix C: Field Notes

# Figures

















 <b>Soun Pacific</b> Environmental Services (707) 269-0884	<b>AERIAL/TOPO MAP</b>		<b>Figure</b>
	Blue Lake 76 291 Blue Lake Boulevard Blue Lake, California 95525	<b>Project No.</b>	<b>Report Date</b>
		SP-110	6/30/06
			<b>1</b>



# LEGEND

- MW-2  Damaged Monitoring Well
- DW-1  Domestic Well
- MW-4  Monitoring Well
-  Cement Surface
-  Vegetation
-  Asphalt Surface
-  Water
-  Sewer Line
-  Above Ground Electric Line
-  Telephone
-  Fence
-  Junk Pile

0 30 60  
APPROXIMATE SCALE IN FEET

Elgar's  
Apartments

PL

Blue Lake Boulevard

Sidewalk

Orchard

NORTH

DW-1

Shed

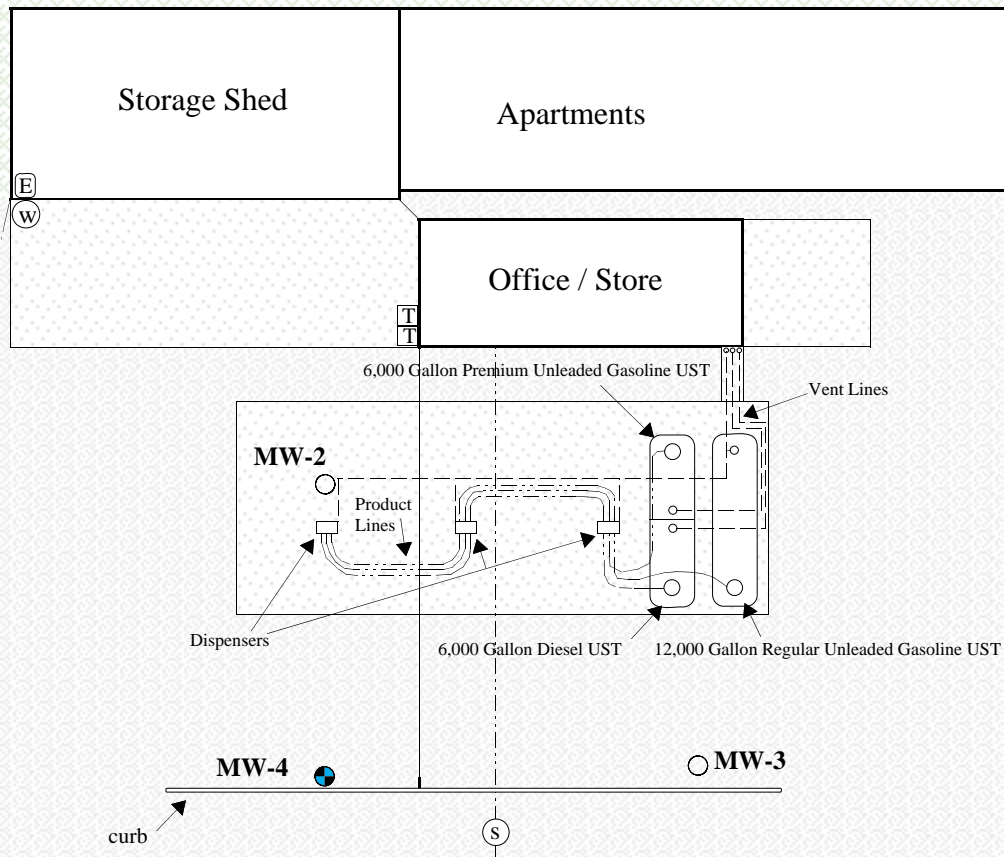
Shed

Shed

Driveway

Hedge

Private Residence



## SITE PLAN

Blue Lake 76  
291 Blue Lake Boulevard  
Blue Lake, California 95525

Project No.

SP-110

Report Date

6/30/06








Figure

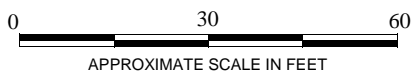
2





# LEGEND

- DW-1  Domestic Well
- MW-1  Monitoring Well
- BP Blue #1  Soil Sample (9/1994)
- B-1  Soil Boring (3/1997)
- B-3  Soil Boring (9/2000)
- B-9  Soil Boring (5/2002)
- B-14  Soil Boring (5/2004)



PL

Blue Lake Boulevard

NORTH

## SAMPLE LOCATION MAP

Figure

3

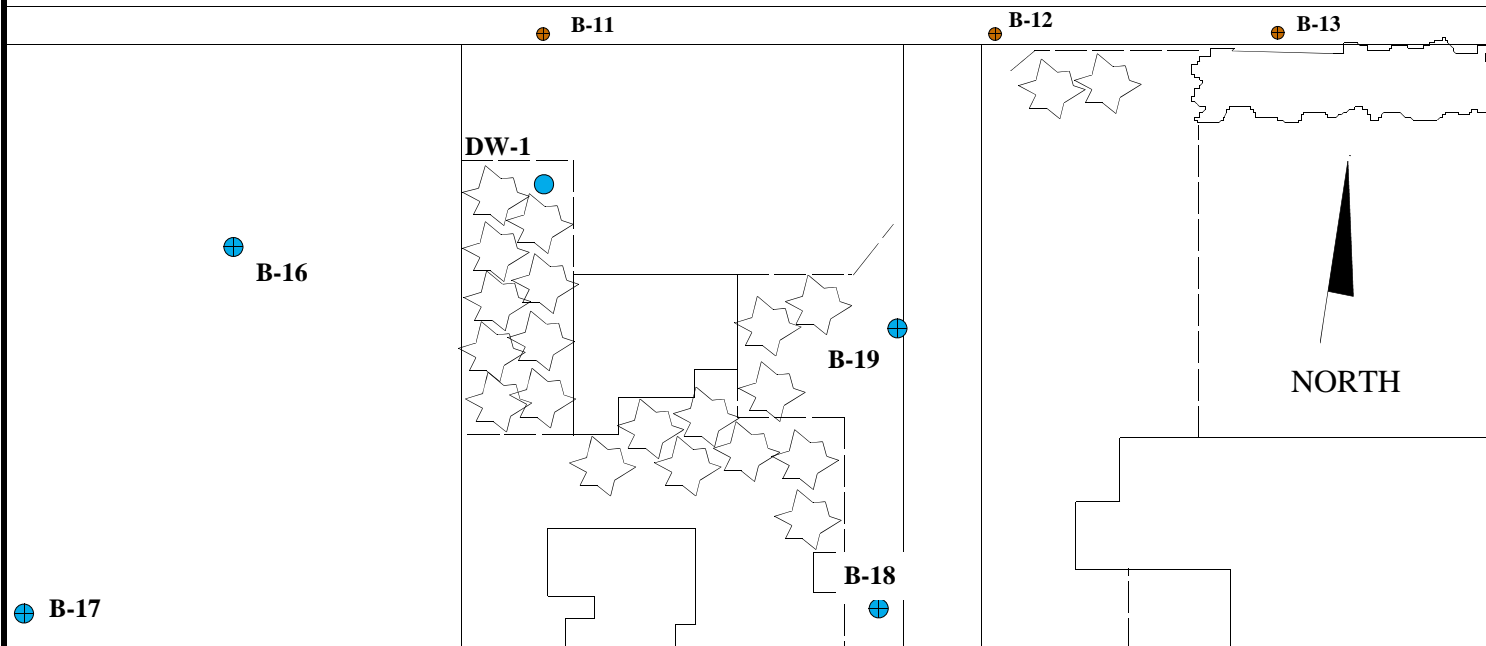
Blue Lake 76  
291 Blue Lake Boulevard  
Blue Lake, California 95525

Project No.



SP-110

Report Date

6/30/06



# LEGEND

- DW-1  Domestic Well
- MW-4  Monitoring Well

0 30 60  
APPROXIMATE SCALE IN FEET

PL

Blue Lake Boulevard

## MW-2

Casing Elevation: 124.91  
Depth to Water: 8.60  
Elevation Amsl: 116.31

## MW-4

Casing Elevation: 124.07  
Depth to Water: 10.77  
Elevation Amsl: 113.30

## MW-3

Casing Elevation: 125.26  
Depth to Water: 9.45  
Elevation Amsl: 115.81

**GW Flow Direction: SSW**  
**GW Gradient: 0.08 ft/ft**

NORTH

Shed

Shed

## GROUNDWATER GRADIENT & FLOW DIRECTION May 2005

Figure

Environmental

Services

Blue Lake 76  
291 Blue Lake Boulevard  
Blue Lake, California 95525

Project No.



Project Date

SP-110

6/30/06

4

# LEGEND

- DW-1  Domestic Well
- MW-4  Monitoring Well

0 30 60  
APPROXIMATE SCALE IN FEET

PL

Blue Lake Boulevard

## Groundwater Results MW-2

All results non-detect

## Groundwater Results MW-4

MTBE	7.6	ppb
TPHd	51	ppb

## Groundwater Results MW-3

All results non-detect

NORTH

## GROUNDWATER ANALYTICAL RESULTS

Figure

5

Environmental

Services

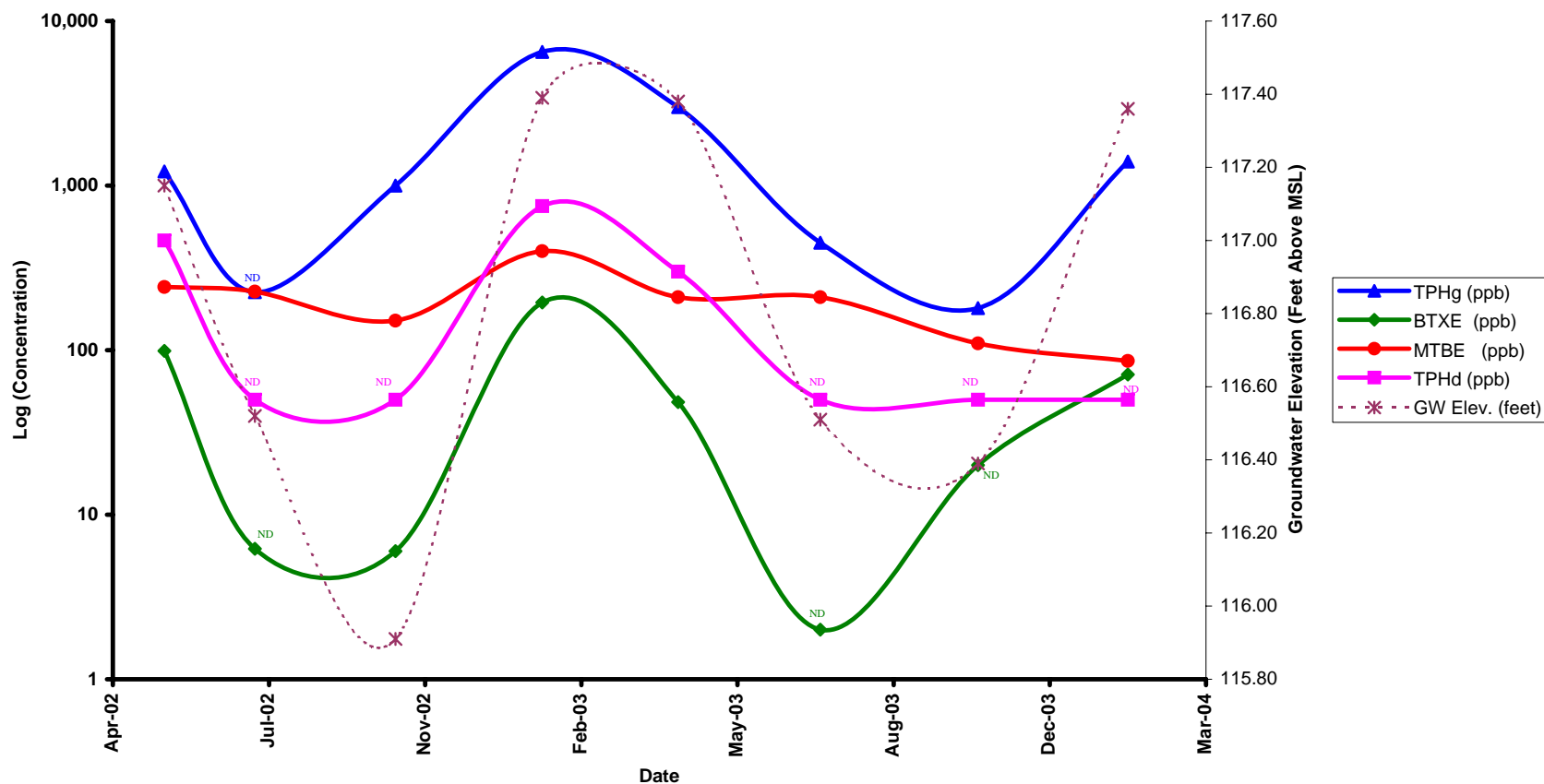
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### MW-1 HYDROCARBON CONCENTRATIONS VS. TIME

Blue Lake 76  
291 Blue Lake Boulevard  
Blue Lake, California 95525

Project No.

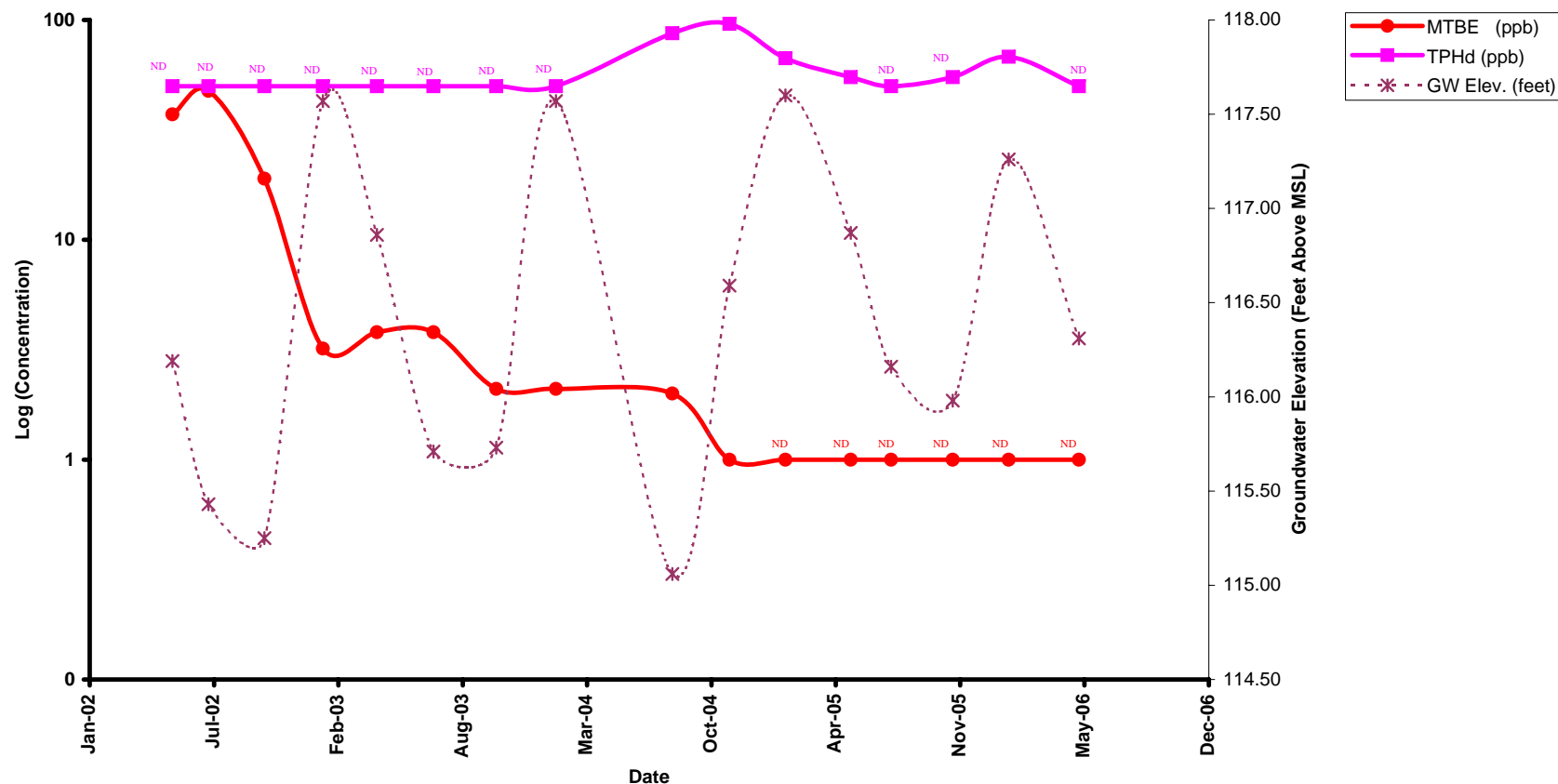
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6/30/2006

Figure

6



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### MW-2 HYDROCARBON CONCENTRATIONS VS. TIME

Blue Lake 76  
 291 Blue Lake Boulevard  
 Blue Lake, California 95525

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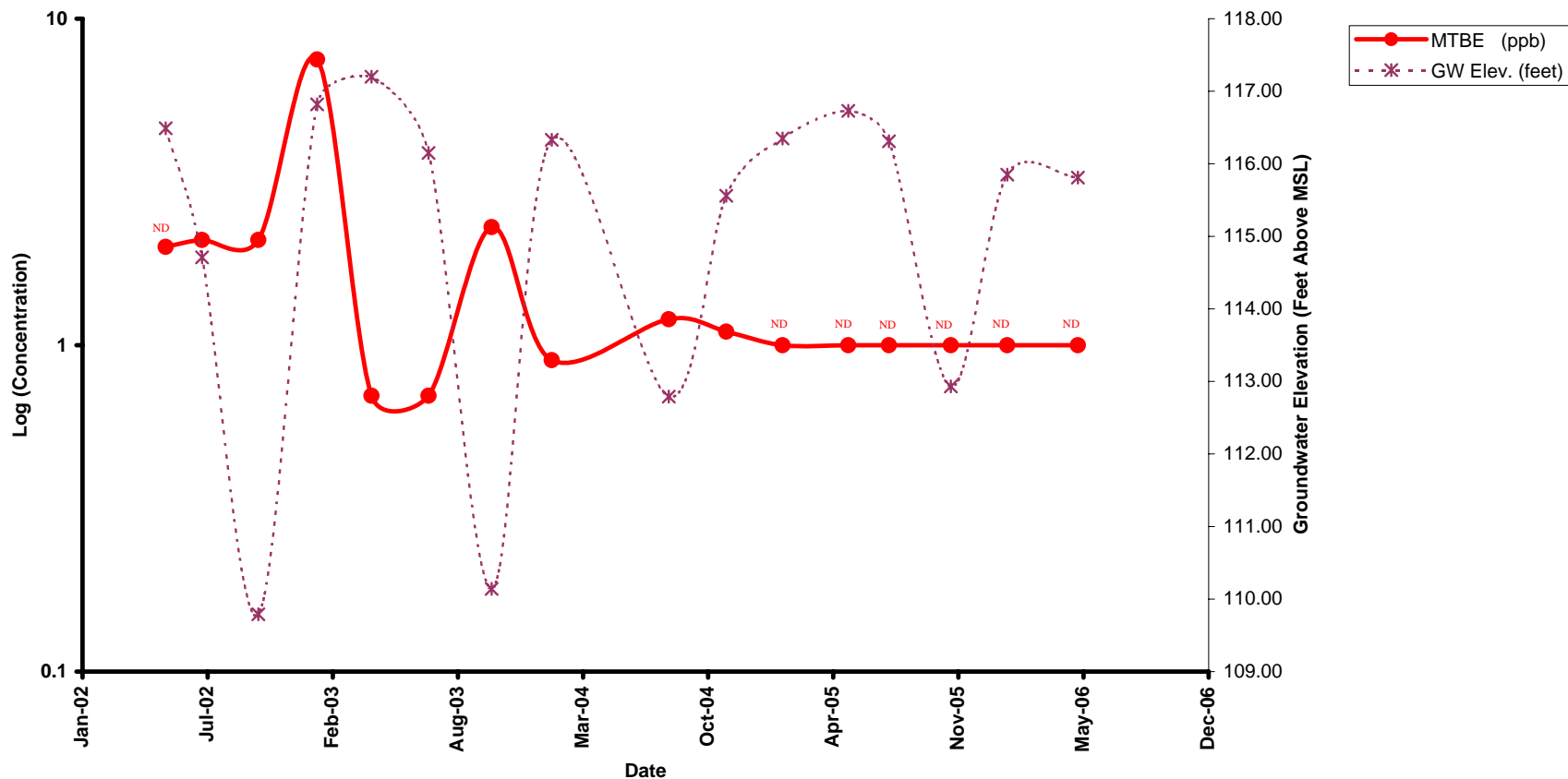
SP-110

Date

6/30/2006

Figure

7



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### MW-3 HYDROCARBON CONCENTRATIONS VS. TIME

Blue Lake 76  
 291 Blue Lake Boulevard  
 Blue Lake, California 95525

Project No.

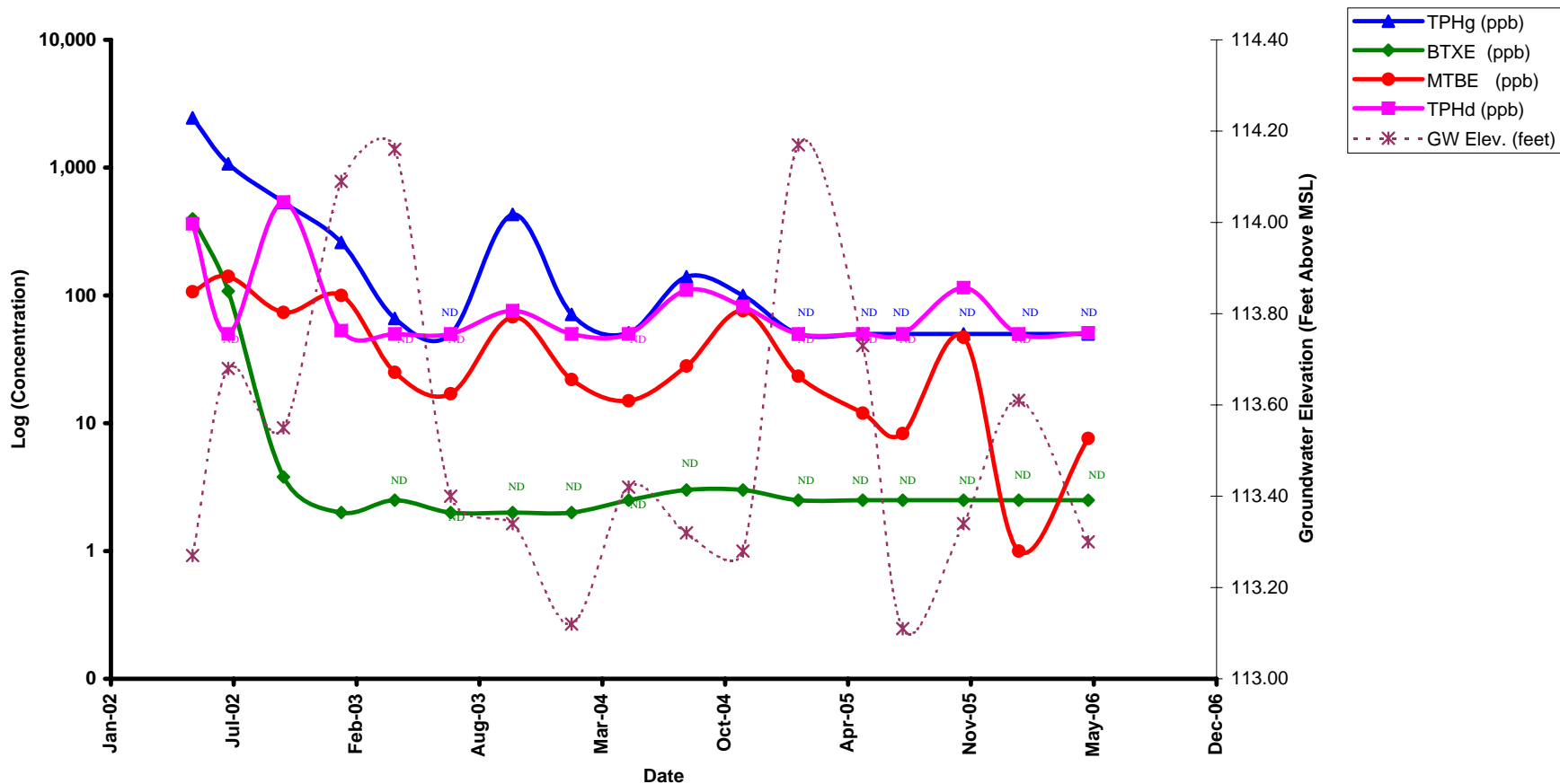
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Date

6/30/2006

Figure

8



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### MW-4 HYDROCARBON CONCENTRATIONS VS. TIME

Blue Lake 76  
 291 Blue Lake Boulevard  
 Blue Lake, California 95525

Project No.

SP-110

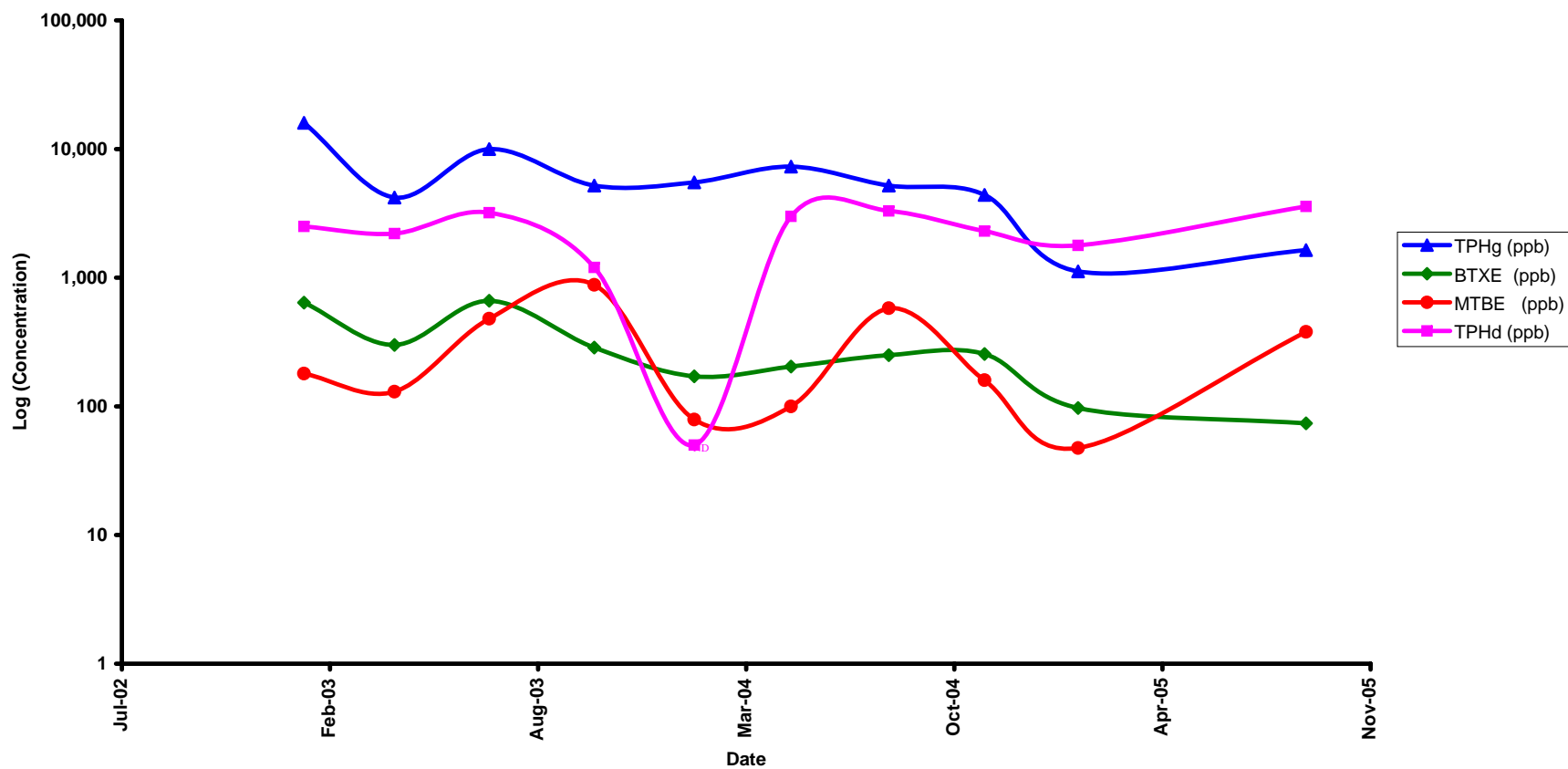
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6/30/2006

Figure

9





### DW-1 HYDROCARBON CONCENTRATIONS VS. TIME

Blue Lake 76  
 291 Blue Lake Boulevard  
 Blue Lake, California 95525

Project No.

SP-110

Date

6/30/2006

Figure

10



# Tables & Chart

**Table 1**  
**Soil Analytical Results**  
Blue Lake 76  
291 Blue Lake Boulevard  
Blue Lake, California 95525

Sample ID	Sample Location	Sample Date	TPH <sub>g</sub> (ppm)	Benzene (ppm)	Toluene (ppm)	Xylenes (ppm)	Ethylbenzene (ppm)	MTBE (ppm)	DIPE (ppm)	TAME (ppm)	ETBE (ppm)	TBA (ppm)	TPH <sub>d</sub> (ppm)	TPH <sub>mo</sub> (ppm)	Lead (ppm)
B.P. Blue #1		9/28/1994	490	0.25	2.0	9.4	1.4	----	----	----	----	----	----	----	65
B.P. Blue #2		9/28/1994	490	0.69	5.2	16.5	2.3	----	----	----	----	----	----	----	----
B.P. Blue #3		9/28/1994	3.7	0.1	0.43	0.26	0.056	----	----	----	----	----	----	----	----
B-1 @ 5.5'	B-1	3/27/1997	2.1	ND*	0.0054	0.031	0.014	0.016	----	----	----	----	ND*	ND*	9
B-1 @ 9.0'	B-1	3/27/1997	10	0.016	ND*	0.49	0.14	0.68	----	----	----	----	ND*	ND*	6.6
B-2 @ 5.0'	B-2	3/27/1997	ND*	ND*	ND*	ND*	ND*	ND*	----	----	----	----	16	360	7.6
B-2 @ 10.5'	B-2	3/27/1997	11	ND*	ND*	ND*	ND*	ND*	----	----	----	----	71	23	6.9
MW-1 @ 3.0'	MW-1	3/27/1997	15	0.044	0.029	0.93	0.031	0.23	----	----	----	----	ND*	11	8.3
MW-1 @ 7'	MW-1	3/27/1997	6	0.02	0.009	0.11	0.08	0.22	----	----	----	----	ND*	ND*	7.8
MW-2 @ 5.5'	MW-2	3/27/1997	ND*	ND*	ND*	0.013	ND*	ND*	----	----	----	----	ND*	ND*	8.4
MW-2 @ 10.5'	MW-2	3/27/1997	ND*	ND*	ND*	ND*	ND*	ND*	----	----	----	----	ND*	ND*	6
BL76B-3 @ 5'	B-3	9/7/2000	6.2	0.012	ND < 0.03	0.107	0.073	0.091	----	----	----	----	ND < 1.0	ND < 10	----
BL76B-3 @ 10'	B-3	9/7/2000	6.8	ND < 0.005	ND < 0.04	ND < 0.04	0.019	ND < 0.05	----	----	----	----	ND < 1.0	ND < 10	----
BL76B-3 @ 15'	B-3	9/7/2000	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	ND < 0.05	----	----	----	----	ND < 1.0	ND < 10	----
BL76B-3 @ 20'	B-3	9/7/2000	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	ND < 0.05	----	----	----	----	ND < 1.0	ND < 10	----
BL76B-4 @ 5'	B-4	9/7/2000	3.1	0.013	ND < 0.02	0.023	0.012	ND < 0.05	----	----	----	----	ND < 1.0	ND < 10	----
BL76B-4 @ 10'	B-4	9/7/2000	6.0	ND < 0.005	ND < 0.03	0.021	0.0087	ND < 0.05	----	----	----	----	2.8	ND < 10	----
BL76B-4 @ 15'	B-4	9/7/2000	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	ND < 0.05	----	----	----	----	ND < 1.0	ND < 10	----
BL76B-4 @ 20'	B-4	9/7/2000	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	ND < 0.05	----	----	----	----	ND < 1.0	ND < 10	----
BL76B-5 @ 5'	B-5	9/7/2000	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	ND < 0.05	----	----	----	----	ND < 1.0	ND < 10	----
BL76B-5 @ 10'	B-5	9/7/2000	4.8	0.0094	0.24	0.18	0.02	ND < 0.05	----	----	----	----	34	ND < 10	----
BL76B-5 @ 15'	B-5	9/7/2000	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	ND < 0.05	----	----	----	----	ND < 1.0	ND < 10	----
BL76B-5 @ 20'	B-5	9/7/2000	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	ND < 0.05	----	----	----	----	ND < 1.0	ND < 10	----
BL76B-5 @ 25'	B-5	9/7/2000	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	ND < 0.05	----	----	----	----	ND < 1.0	11	----
BL76B-6 @ 5'	B-6	9/7/2000	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	ND < 0.05	----	----	----	----	ND < 1.0	ND < 10	----
BL76B-6 @ 10'	B-6	9/7/2000	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	ND < 0.05	----	----	----	----	ND < 1.0	ND < 10	----
BL76B-6 @ 15'	B-6	9/7/2000	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	ND < 0.05	----	----	----	----	ND < 1.0	ND < 10	----
BL76B-7 @ 5'	B-7	9/7/2000	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	ND < 0.05	----	----	----	----	ND < 1.0	ND < 10	----
BL76B-7 @ 10'	B-7	9/7/2000	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	ND < 0.05	----	----	----	----	ND < 1.0	ND < 10	----
BL76B-8 @ 5'	B-8	9/7/2000	1.9	ND < 0.005	ND < 0.005	0.057	0.0082	ND < 0.05	----	----	----	----	ND < 1.0	ND < 10	----
BL76B-8 @ 10'	B-8	9/7/2000	1,400	ND < 0.06	ND < 4.0	121	21	ND < 0.25	----	----	----	----	33	ND < 10	----
BL76B-8 @ 15'	B-8	9/7/2000	ND < 1.0	ND < 0.005	ND < 0.005	0.0092	ND < 0.005	ND < 0.05	----	----	----	----	ND < 1.0	ND < 10	----

**Table 1 (cont.)**  
**Soil Analytical Results**  
Blue Lake 76  
291 Blue Lake Boulevard  
Blue Lake, California 95525

Sample ID	Sample Location	Sample Date	TPH <sub>g</sub> (ppm)	Benzene (ppm)	Toluene (ppm)	Xylenes (ppm)	Ethylbenzene (ppm)	MTBE (ppm)	DIPE (ppm)	TAME (ppm)	ETBE (ppm)	TBA (ppm)	TPH <sub>d</sub> (ppm)	TPH <sub>mo</sub> (ppm)	Lead (ppm)
SB-9 @ 4'	B-9	5/14/2002	ND < 0.060	ND < 0.005	ND < 0.005	ND < 0.015	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 5.0	----	----
SB-9 @ 8'	B-9	5/14/2002	ND < 0.060	ND < 0.005	ND < 0.005	ND < 0.015	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 5.0	----	----
SB-9 @ 12'	B-9	5/14/2002	ND < 0.060	ND < 0.005	ND < 0.005	ND < 0.015	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 5.0	----	----
SB-9 @ 16'	B-9	5/14/2002	ND < 0.060	ND < 0.005	ND < 0.005	ND < 0.015	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 5.0	----	----
SB-10 @ 4'	B-10	5/14/2002	<b>0.488</b>	<b>0.019</b>	ND < 0.005	ND < 0.015	ND < 0.005	<b>0.014</b>	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 5.0	----	----
SB-10 @ 8'	B-10	5/14/2002	ND < 0.060	ND < 0.005	ND < 0.005	ND < 0.015	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 5.0	----	----
SB-10 @ 12'	B-10	5/14/2002	<b>9.68</b>	ND < 0.05	ND < 0.05	ND < 0.15	<b>0.095</b>	ND < 0.05	ND < 0.05	ND < 0.05	ND < 0.05	ND < 0.05	ND < 5.0	----	----
SB-10 @ 16'	B-10	5/14/2002	<b>1.1</b>	ND < 0.005	<b>0.005</b>	<b>0.02</b>	<b>0.063</b>	<b>0.270</b>	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 5.0	----	----
SB-11 @ 4'	B-11	5/14/2002	ND < 0.060	ND < 0.005	ND < 0.005	ND < 0.015	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 5.0	----	----
SB-11 @ 8'	B-11	5/14/2002	ND < 0.060	ND < 0.005	ND < 0.005	ND < 0.015	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 5.0	----	----
SB-11 @ 12'	B-11	5/14/2002	<b>30.5</b>	<b>0.092</b>	ND < 0.005	<b>1.28</b>	<b>1.13</b>	<b>0.231</b>	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 5.0	----	----
SB-11 @ 16'	B-11	5/14/2002	<b>29.2</b>	<b>0.197</b>	<b>0.012</b>	<b>0.554</b>	<b>0.931</b>	<b>0.0589</b>	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 5.0	----	----
SB-12 @ 8'	B-12	5/14/2002	ND < 0.060	ND < 0.005	ND < 0.005	ND < 0.015	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 5.0	----	----
SB-12 @ 12'	B-12	5/14/2002	<b>0.427</b>	ND < 0.005	ND < 0.005	ND < 0.015	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 5.0	----	----
SB-12 @ 16'	B-12	5/14/2002	<b>20.4</b>	<b>0.009</b>	ND < 0.005	ND < 0.015	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 5.0	----	----
SB-13 @ 4'	B-13	5/14/2002	ND < 0.060	ND < 0.005	ND < 0.005	ND < 0.015	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 5.0	----	----
SB-13 @ 8'	B-13	5/14/2002	ND < 0.060	ND < 0.005	ND < 0.005	ND < 0.015	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 5.0	----	----
SB-13 @ 12'	B-13	5/14/2002	ND < 0.060	ND < 0.005	ND < 0.005	ND < 0.015	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 5.0	----	----
SB-13 @ 16'	B-13	5/14/2002	ND < 0.060	ND < 0.005	ND < 0.005	ND < 0.015	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 5.0	----	----
SB-13 @ 20'	B-13	5/14/2002	ND < 0.060	ND < 0.005	ND < 0.005	ND < 0.015	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 5.0	----	----
1-North	UST PIT	3/19/2004	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	ND < 0.05	----	----	----	----	----	----	ND < 10
1-South	UST PIT	3/19/2004	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	ND < 0.05	----	----	----	----	----	----	ND < 10
2-South	UST PIT	3/19/2004	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	ND < 0.05	----	----	----	----	----	----	ND < 10
2-North	UST PIT	3/19/2004	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	ND < 0.05	----	----	----	----	----	----	ND < 10
3-South	UST PIT	3/19/2004	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	ND < 0.05	----	----	----	----	<b>1.1</b>	----	----
4-South	UST PIT	3/19/2004	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	ND < 0.05	----	----	----	----	----	----	ND < 10
1-Sidewall	UST PIT	3/19/2004	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	ND < 0.05	----	----	----	----	----	----	ND < 10
BL 76 EX-1	EXCAVATION	3/24/2004	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.05	ND < 1.0	----	<b>6.6</b>
BL 76 EX-2	EXCAVATION	3/24/2004	ND < 1.0	ND < 0.005	<b>0.009</b>	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.05	ND < 1.0	----	<b>7.2</b>
BL 76 EX-3	EXCAVATION	3/24/2004	<b>580</b>	<b>5.9</b>	<b>36</b>	<b>4.9</b>	<b>2.4</b>	ND < 1.0	ND < 1.0	ND < 1.0	ND < 1.0	ND < 1.0	<b>35</b>	----	<b>6.3</b>
BL 76 EX-4	EXCAVATION	3/24/2004	<b>860</b>	<b>12</b>	<b>87</b>	<b>7.1</b>	<b>3.1</b>	ND < 1.0	ND < 1.0	ND < 1.0	ND < 1.0	ND < 1.0	<b>820</b>	----	<b>6.7</b>
BL 76 EX-5	EXCAVATION	3/24/2004	<b>260</b>	<b>2.5</b>	<b>25</b>	<b>1.6</b>	<b>1.4</b>	ND < 1.0	ND < 1.0	ND < 1.0	ND < 1.0	ND < 1.0	<b>14</b>	----	<b>8.2</b>
BL 76 EX-6	EXCAVATION	3/24/2004	<b>36</b>	ND < 0.1	<b>8.8</b>	<b>0.24</b>	<b>0.12</b>	ND < 0.25	ND < 0.25	ND < 0.25	ND < 0.25	ND < 2.5	<b>120</b>	----	<b>6.6</b>
BL 76 EX-7	EXCAVATION	3/24/2004	ND < 1.0	ND < 0.005	<b>0.005</b>	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.05	<b>1.6</b>	----	<b>7.6</b>

Notes:

TPH<sub>g</sub>: Total petroleum hydrocarbons as gasoline.

MTBE: Methyl tertiary butyl ether

DIPE: Diisopropyl ether

TAME: Tertiary amyl methyl ether

ETBE: Ethyl tertiary butyl ether

TPH<sub>mo</sub>: Total petroleum hydrocarbons as motor oil.

TBA: Tertiary butanol

TPH<sub>d</sub>: Total petroleum hydrocarbons as diesel.

ppm: parts per million = µg/g = mg/kg = 1000 µg/kg

ND: Not detected. Sample was detected below the method detection limit as shown.

ND\*: Not detected. Method detection limit unknown.

**Table 1 (cont.)**  
**Soil Analytical Results**  
Blue Lake 76  
291 Blue Lake Boulevard  
Blue Lake, California 95525

Sample ID	Sample Location	Sample Date	TPHg (ppm)	Benzene (ppm)	Toluene (ppm)	Xylenes (ppm)	Ethylbenzene (ppm)	MTBE (ppm)	DIPE (ppm)	TAME (ppm)	ETBE (ppm)	TBA (ppm)	TPHd (ppm)	TPHmo (ppm)
SB-14 @ 3'	B-14	5/26/2004	ND < 1.0	ND < 0.005	ND < 0.005	<b>0.013</b>	ND < 0.005	<b>0.027</b>	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.050	ND < 1.0	<b>16</b>
SB-14 @ 8'	B-14	5/26/2004	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.010	ND < 0.005	<b>0.012</b>	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.050	<b>1.5</b>	ND < 10
SB-14 @ 12'	B-14	5/26/2004	ND < 93	ND < 0.93	ND < 0.93	<b>5.7</b>	<b>1.1</b>	ND < 0.93	ND < 0.93	ND < 0.93	ND < 0.93	ND < 9.3	<b>9.1</b>	ND < 10
SB-14 @ 14'	B-14	5/26/2004	ND < 100	ND < 1.0	ND < 1.0	<b>5.7</b>	ND < 1.0	ND < 1.0	ND < 1.0	ND < 1.0	ND < 1.0	ND < 10	<b>49</b>	<b>640</b>
SB-14 @ 15'	B-14	5/26/2004	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.010	ND < 0.005	<b>0.040</b>	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.050	ND < 1.0	ND < 10
SB-15 @ 1'	B-15	5/26/2004	ND < 110	ND < 1.1	ND < 1.1	<b>5.9</b>	ND < 1.1	ND < 1.1	ND < 1.1	ND < 1.1	ND < 1.1	ND < 11	<b>5.0</b>	ND < 10
SB-15 @ 4'	B-15	5/26/2004	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.010	ND < 0.005	<b>0.048</b>	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.050	ND < 1.0	ND < 10
SB-15 @ 8'	B-15	5/26/2004	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.010	ND < 0.005	<b>0.056</b>	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.050	ND < 1.0	ND < 10
SB-15 @ 11'	B-15	5/26/2004	<b>1,500</b>	ND < 1.8	ND < 1.8	<b>15.8</b>	<b>12</b>	ND < 1.8	ND < 1.8	ND < 1.8	ND < 1.8	ND < 18	<b>640</b>	ND < 10
SB-15 @ 15'	B-15	5/26/2004	ND < 59	ND < 0.59	ND < 0.59	<b>7.0</b>	<b>1.1</b>	ND < 0.59	ND < 0.59	ND < 0.59	ND < 0.59	ND < 5.9	<b>2.1</b>	ND < 10
SB-16 @ 12.5'	B-16	5/26/2004	<b>160</b>	ND < 1.3	ND < 1.3	<b>7.5</b>	<b>1.3</b>	ND < 1.3	ND < 1.3	ND < 1.3	ND < 1.3	ND < 13	<b>10</b>	ND < 10
SB-16 @ 15'	B-16	5/26/2004	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.010	ND < 0.005	<b>0.12</b>	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.050	ND < 1.0	ND < 10
SB-17 @ 11'	B-17	5/26/2004	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.010	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.050	ND < 1.0	ND < 10
SB-20 @ 4'	B-20	5/26/2004	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.010	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.050	ND < 1.0	ND < 10
SB-20 @ 8'	B-20	5/26/2004	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.010	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.050	ND < 1.0	ND < 10
SB-20 @ 11'	B-20	5/26/2004	<b>1.2</b>	ND < 0.005	ND < 0.005	ND < 0.010	ND < 0.005	<b>0.008</b>	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.050	<b>7.3</b>	ND < 10
SB-20 @ 13'	B-20	5/26/2004	<b>1.7</b>	ND < 0.005	ND < 0.005	<b>0.007</b>	<b>0.009</b>	<b>0.008</b>	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.050	<b>130</b>	ND < 200
SB-20 @ 14'	B-20	5/26/2004	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.010	ND < 0.005	<b>0.081</b>	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.050	<b>1.7</b>	ND < 10
SB-21 @ 4'	B-21	5/26/2004	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.010	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.050	ND < 1.0	ND < 10
SB-21 @ 8'	B-21	5/26/2004	ND < 1.0	ND < 0.005	ND < 0.005	<b>0.005</b>	ND < 0.005	<b>0.006</b>	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.050	ND < 1.0	ND < 10
SB-21 @ 11'	B-21	5/26/2004	<b>1,100</b>	ND < 0.005	<b>0.009</b>	<b>13.8</b>	<b>5.6</b>	<b>0.013</b>	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.050	<b>670</b>	ND < 10
SB-21 @ 14'	B-21	5/26/2004	<b>2.6</b>	ND < 0.005	ND < 0.005	<b>0.081</b>	<b>0.095</b>	<b>0.016</b>	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.050	<b>2.1</b>	ND < 10
SB-21 @ 16'	B-21	5/26/2004	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.010	ND < 0.005	<b>0.047</b>	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.050	ND < 1.0	ND < 10

Notes:

TPHg: Total petroleum hydrocarbons as gasoline.

MTBE: Methyl tertiary butyl ether

DIPE: Diisopropyl ether

TAME: Tertiary amyl methyl ether

ETBE: Ethyl tertiary butyl ether

TPHmo: Total petroleum hydrocarbons as motor oil.

TBA: Tertiary butanol

TPHd: Total petroleum hydrocarbons as diesel.

ppm: parts per million = µg/g = mg/kg = 1000 µg/kg

ND: Not detected. Sample was detected below the method detection limit as shown.

**Table 2**  
**Groundwater Analytical Results from Boreholes**  
Blue Lake 76  
291 Blue Lake Boulevard  
Blue Lake, California 95525

Sample ID	Sample Location	Sample Date	TPHg (ppb)	Benzene (ppb)	Toluene (ppb)	Xylenes (ppb)	Ethylbenzene (ppb)	MTBE (ppb)	DIPE (ppb)	TAME (ppb)	ETBE (ppb)	TBA (ppb)	DBE (ppb)	DCE (ppb)	TPHd (ppb)	TPHmo (ppb)	Lead (ppb)
BL76B-3 @ 17.5' GW	B-3	9/7/2000	550	3.8	0.67	6.7	8.7	540	ND < 1.0	3.6	ND < 1.0	82	ND < 4	ND < 1.0	ND < 50	ND < 170	NT
BL76B-4 @ 21' GW	B-4	9/7/2000	140	0.83	0.52	ND < 1.0	ND < 0.5	16	ND < 1.0	ND < 1	ND < 1.0	17	ND < 2.0	ND < 1.0	3,700	2,700	NT
BL76B-5 @ 26' GW	B-5	9/7/2000	ND < 50	ND < 0.5	ND < 0.5	ND < 1.0	ND < 0.5	ND < 0.5	ND < 1.0	ND < 1	ND < 1.0	ND < 10	ND < 2.0	ND < 1.0	ND < 50	ND < 170	NT
BL76B-6 @ 10.8' GW	B-6	9/7/2000	ND < 50	ND < 0.5	ND < 0.5	ND < 1.0	ND < 0.5	ND < 0.5	ND < 1.0	ND < 1	ND < 1.0	ND < 10	ND < 2.0	ND < 1.0	53	ND < 170	NT
BL76B-7 @ 8.1' GW	B-7	9/7/2000	51	ND < 0.5	ND < 0.5	ND < 1.0	ND < 0.5	0.84	ND < 1.0	ND < 1	ND < 1.0	ND < 10	ND < 2.0	ND < 1.0	ND < 50	ND < 170	NT
BL76B-8 @ 12' GW	B-8	9/7/2000	2,500	4.1	6.1	480	110	77	ND < 2.5	13	ND < 2.5	ND < 25	ND < 10	ND < 2.5	210	ND < 170	NT
GW SB-9 @ 16'	B-9	5/14/2002	ND < 50	ND < 0.3	ND < 0.3	ND < 0.6	ND < 0.3	ND < 2.0	ND < 0.5	ND < 0.5	ND < 0.5	ND < 40	ND < 0.5	ND < 0.5	ND < 50	ND < 50	NT
GW SB-10 @ 16'	B-10	5/14/2002	2,530	ND < 0.3	ND < 0.3	7.6	26.9	758	ND < 0.5	ND < 0.5	ND < 0.5	ND < 40	ND < 0.5	ND < 0.5	818	ND < 50	NT
GW SB-11 @ 16'	B-11	5/14/2002	10,600	258	8.3	119	240	4,130	ND < 0.5	ND < 0.5	ND < 0.5	ND < 40	ND < 0.5	ND < 0.5	868	ND < 50	NT
GW SB-12 @ 16'	B-12	5/14/2002	7,890	ND < 30	ND < 30	ND < 60	ND < 30	71.8	ND < 30	ND < 50	ND < 50	ND < 4,000	ND < 50	ND < 50	178,000	ND < 2,500	NT
GW SB-13 @ 20'	B-13	5/14/2002	ND < 50	ND < 0.3	ND < 0.3	ND < 0.6	ND < 0.3	ND < 2.0	ND < 0.5	ND < 0.5	ND < 0.5	ND < 40	ND < 0.5	ND < 0.5	ND < 50	ND < 50	NT
DW-1	DW-1	5/14/2002	4,410	72.3	20.6	241	197	385	ND < 0.5	ND < 0.5	ND < 0.5	ND < 40	ND < 0.5	ND < 0.5	2,100	ND < 50	NT
Super Pit	UST PIT	3/19/2004	N/Q > 2,000	N/Q > 10	N/Q > 10	N/Q > 30	N/Q > 10	ND < 30	----	----	----	----	----	----	----	----	50
Main Pit	UST PIT	3/19/2004	8,000	420	67	272	330	220	----	----	----	----	----	----	3,900,000	----	3,800
SBGW-14	B-14	5/26/2004	1,700	5.7	2.1	83.6	65	40	ND < 0.5	1.6	ND < 0.5	ND < 5.0	----	----	950	ND < 500	----
SBGW-15	B-15	5/26/2004	4,100	6.6	2.4	95.6	160	2,100	ND < 0.5	11	33	66	----	----	400	ND < 500	----
SBGW-16	B-16	5/28/2004	2,300	1.7	0.6	1.0	8.8	470	ND < 0.5	7.5	10	57	----	----	890	ND < 500	----
SBGW-18	B-18	5/28/2004	ND < 50	ND < 0.5	ND < 0.5	ND < 1.0	ND < 0.5	3.3	ND < 0.5	ND < 0.5	ND < 0.5	ND < 5.0	----	----	ND < 50	ND < 500	----
SBGW-19	B-19	5/28/2004	ND < 50	ND < 0.5	0.8	ND < 1.0	ND < 0.5	41	ND < 0.5	ND < 0.5	1.3	ND < 5.0	----	----	----	ND < 500	----
SBGW-20	B-20	5/26/2004	2,800	ND < 10	ND < 10	ND < 20	10	24	ND < 10	ND < 10	ND < 10	ND < 100	----	----	14,000	ND < 500	----
SBGW-21	B-21	5/26/2004	8,700	5.5	ND < 5.0	307	250	44	ND < 5.0	ND < 5.0	ND < 5.0	ND < 50.0	----	----	2,100	ND < 500	----

Notes:

TPHg: Total petroleum hydrocarbons as gasoline.

MTBE: Methyl tertiary butyl ether

DIPE: Diisopropyl ether

TAME: Tertiary amyl methyl ether

ETBE: Ethyl tertiary butyl ether

TPHmo: Total petroleum hydrocarbons as motor oil.

TBA: Tertiary butanol

TPHd: Total petroleum hydrocarbons as diesel.

ppb: parts per billion = µg/l = .001 mg/l = 0.001 ppm.

ND: Not detected. Sample was detected below the method detection limit as shown.

DBE: 1,2-dibromoethane

DCE:1,2-dichloroethane

N/Q: Not quantifiable due to high concentration of analyte. Sample was detected above the concentration indicated.

**Table 3**  
**Water Levels**

Blue Lake 76  
291 Blue Lake Boulevard  
Blue Lake, California 95525

Sample Location	Date	Depth to Bottom/ Feet BToC	Survey Height/ Feet AMSL	Depth to Water/ Feet BToC	Adjusted Elevation/ Feet AMSL	Thickness of Floating Product / Feet
MW-1	5/19/2002	15.26	125.50	8.35	117.15	0.00
	6/16/2002	15.26	125.50	8.62	116.88	0.00
	7/16/2002	15.30	125.50	8.98	116.52	0.00
	8/19/2002	15.25	125.50	9.43	116.07	0.00
	9/11/2002	15.31	125.50	9.57	115.93	0.00
	10/14/2002	15.26	125.50	9.59	115.91	0.00
	11/15/2002	15.29	125.50	8.95	116.55	0.00
	12/16/2002	15.24	125.50	7.82	117.68	0.00
	1/16/2003	15.29	125.50	8.11	117.39	0.00
	2/14/2003	15.30	125.50	8.15	117.35	0.00
	3/12/2003	15.28	125.50	8.13	117.37	0.00
	4/13/2003	15.21	125.50	8.12	117.38	0.00
	7/13/2003	19.12	125.50	8.99	116.51	0.00
	10/22/2003	15.21	125.50	9.11	116.39	0.00
	1/26/2004	15.21	125.50	8.14	117.36	0.00
MW-2	5/19/2002	18.24	124.91	8.72	116.19	0.00
	6/16/2002	18.24	124.91	9.09	115.82	0.00
	7/16/2002	18.21	124.91	9.48	115.43	0.00
	8/19/2002	18.18	124.91	9.61	115.30	0.00
	9/11/2002	18.24	124.91	9.63	115.28	0.00
	10/14/2002	18.21	124.91	9.66	115.25	0.00
	11/15/2002	18.22	124.91	8.72	116.19	0.00
	12/16/2002	18.19	124.91	6.93	117.98	0.00
	1/16/2003	18.23	124.91	7.34	117.57	0.00
	2/14/2003	18.25	124.91	8.07	116.84	0.00
	3/12/2003	18.22	124.91	8.20	116.71	0.00
	4/13/2003	18.15	124.91	8.05	116.86	0.00
	7/13/2003	18.11	124.91	9.20	115.71	0.00
	10/22/2003	18.11	124.91	9.18	115.73	0.00
	1/26/2004	18.11	124.91	7.34	117.57	0.00
	7/31/2004	18.40	124.91	9.85	115.06	0.00
	10/31/2004	18.13	124.91	8.32	116.59	0.00
	1/29/2005	18.41	124.91	7.31	117.60	0.00
	5/14/2005	18.16	124.91	8.04	116.87	0.00
	7/18/2005	18.15	124.91	8.75	116.16	0.00
	10/25/2005	18.16	124.91	8.93	115.98	0.00
	1/23/2006	18.12	124.91	7.65	117.26	0.00
	5/16/2006	18.11	124.91	8.60	116.31	0.00

**Table 3 (cont.)**  
**Water Levels**  
Blue Lake 76  
291 Blue Lake Boulevard  
Blue Lake, California 95525

Sample Location	Date	Depth to Bottom/ Feet BToC	Survey Height/ Feet AMSL	Depth to Water/ Feet BToC	Adjusted Elevation/ Feet AMSL	Thickness of Floating Product / Feet
MW-3	5/19/2002	18.98	125.26	8.77	116.49	0.00
	6/16/2002	18.98	125.26	9.09	116.17	0.00
	7/16/2002	18.98	125.26	10.55	114.71	0.00
	8/19/2002	18.97	125.26	13.65	111.61	0.00
	9/11/2002	18.99	125.26	14.65	110.61	0.00
	10/14/2002	18.97	125.26	15.47	109.79	0.00
	11/15/2002	19.01	125.26	10.62	114.64	0.00
	12/16/2002	19.25	125.26	9.69	115.57	0.00
	1/16/2003	19.00	125.26	8.44	116.82	0.00
	2/14/2003	19.00	125.26	8.56	116.70	0.00
	3/12/2003	19.05	125.26	8.10	117.16	0.00
	4/13/2003	18.91	125.26	8.06	117.20	0.00
	7/13/2003	19.18	125.26	9.11	116.15	0.00
	10/22/2003	19.18	125.26	15.12	110.14	0.00
	1/26/2004	19.18	125.26	8.93	116.33	0.00
	7/31/2004	19.18	125.26	12.47	112.79	0.00
	10/31/2004	19.20	125.26	9.70	115.56	0.00
	1/29/2005	19.21	125.26	8.91	116.35	0.00
	5/14/2005	19.25	125.26	8.53	116.73	0.00
	7/18/2005	19.21	125.26	8.95	116.31	0.00
	10/25/2005	19.22	125.26	12.33	112.93	0.00
	1/23/2006	19.22	125.26	9.41	115.85	0.00
	5/16/2006	19.23	125.26	9.45	115.81	0.00
MW-4	5/19/2002	19.17	124.07	10.80	113.27	0.00
	6/16/2002	19.18	124.07	10.32	113.75	0.00
	7/16/2002	19.18	124.07	10.39	113.68	0.00
	8/19/2002	19.17	124.07	10.39	113.68	0.00
	9/11/2002	19.21	124.07	10.67	113.40	0.00
	10/14/2002	19.17	124.07	10.52	113.55	0.00
	11/15/2002	19.20	124.07	10.21	113.86	0.00
	12/16/2002	19.47	124.07	9.96	114.11	0.00
	1/16/2003	19.21	124.07	9.98	114.09	0.00
	2/14/2003	19.19	124.07	10.82	113.25	0.00
	3/12/2003	19.27	124.07	10.37	113.70	0.00
	4/13/2003	19.11	124.07	9.91	114.16	0.00
	7/13/2003	19.39	124.07	10.67	113.40	0.00
	10/22/2003	19.39	124.07	10.73	113.34	0.00
	1/26/2004	19.39	124.07	10.95	113.12	0.00
	4/28/2004	19.39	124.07	10.65	113.42	0.00
	7/31/2004	19.38	124.07	10.75	113.32	0.00
	10/31/2004	19.39	124.07	10.79	113.28	0.00
	1/29/2005	19.42	124.07	9.90	114.17	0.00
	5/14/2005	19.43	124.07	10.34	113.73	0.00
	7/18/2005	19.41	124.07	10.96	113.11	0.00
	10/25/2005	19.43	124.07	10.73	113.34	0.00
	1/23/2006	19.41	124.07	10.46	113.61	0.00
	5/16/2006	19.41	124.07	10.77	113.30	0.00

Notes:  
BToC: Below Top of Casing  
AMSL: Above Mean Sea Level

**Table 4**  
**Groundwater Analytical Results from Monitoring Wells**  
Blue Lake 76  
291 Blue Lake Boulevard  
Blue Lake, California 95525

Sample Location	Annual Quarter	Sample Date	TPHg (ppb)	Benzene (ppb)	Toluene (ppb)	Xylenes (ppb)	Ethylbenzene (ppb)	MTBE (ppb)	DIPE (ppb)	TAME (ppb)	ETBE (ppb)	TBA (ppb)	TPHd (ppb)	TPHmo (ppb)	EDB (ppb)	EDC (ppb)
MW-1	2nd Quarter	5/19/2002	1,220	19.1	2.7	29.1	48	242	ND < 0.5	ND < 0.5	ND < 0.5	ND < 40	464	ND < 50	ND < 0.5	ND < 0.5
	3rd Quarter	7/16/2002	225	2.6	0.6	1.0	2.0	227	ND < 0.5	9.2	ND < 0.5	ND < 100	ND < 50	ND < 50	ND < 0.5	ND < 0.5
	4th Quarter	10/14/2002	ND < 1,000	ND < 6.0	ND < 6.0	ND < 6.0	ND < 6.0	151	ND < 10	ND < 10	ND < 10	ND < 2,000	ND < 50	ND < 50	ND < 10	ND < 10
	1st Quarter	1/16/2003	6,500	45	7.4	42.8	100	400	ND < 5.0	9.3	ND < 5.0	500	750	ND < 500	ND < 5.0	ND < 5.0
	2nd Quarter	4/13/2003	3,000	14	ND < 5.0	6.3	28	210	ND < 5.0	ND < 5.0	ND < 5.0	ND < 50	300	ND < 500	----	----
	3rd Quarter	7/13/2003	450	ND < 0.5	ND < 0.5	ND < 0.5	ND < 0.5	210	ND < 0.5	5.1	ND < 0.5	130	ND < 50	ND < 500	ND < 0.5	ND < 0.5
	4th Quarter	10/22/2003	180	ND < 5.0	ND < 5.0	ND < 10.0	ND < 5.0	110	ND < 5.0	ND < 5.0	ND < 5.0	79	ND < 50	ND < 500	ND < 5.0	ND < 5.0
	1st Quarter	1/26/2004	1,400	25	ND < 5.0	7.1	39	86	ND < 5.0	ND < 5.0	ND < 5.0	ND < 50	ND < 50	ND < 500	ND < 5.0	ND < 5.0
MW-2	2nd Quarter	5/19/2002	ND < 50	ND < 0.3	ND < 0.3	ND < 0.6	ND < 0.3	37.2	ND < 0.5	1.6	ND < 0.5	ND < 40	ND < 50	ND < 50	ND < 0.5	ND < 0.5
	3rd Quarter	7/16/2002	ND < 50	ND < 0.3	ND < 0.3	ND < 0.6	ND < 0.3	47.6	ND < 0.5	1.1	ND < 0.5	ND < 100	ND < 50	ND < 50	ND < 0.5	ND < 0.5
	4th Quarter	10/14/2002	ND < 50	ND < 0.3	ND < 0.3	ND < 0.6	ND < 0.3	19.2	ND < 0.5	0.8	ND < 0.5	ND < 100	ND < 50	ND < 50	ND < 0.5	ND < 0.5
	1st Quarter	1/16/2003	ND < 50	ND < 0.5	ND < 0.5	ND < 1.0	ND < 0.5	3.2	ND < 0.5	ND < 0.5	ND < 0.5	ND < 5.0	ND < 50	ND < 500	ND < 0.5	ND < 0.5
	2nd Quarter	4/13/2003	ND < 50	ND < 0.5	ND < 0.5	ND < 1.0	ND < 0.5	3.8	ND < 0.5	ND < 0.5	ND < 0.5	ND < 5.0	ND < 50	ND < 500	----	----
	3rd Quarter	7/13/2003	ND < 50	ND < 0.5	ND < 0.5	ND < 0.5	ND < 0.5	3.7	ND < 0.5	ND < 0.5	ND < 0.5	ND < 0.5	ND < 50	ND < 500	ND < 0.5	ND < 0.5
	4th Quarter	10/22/2003	ND < 50	ND < 0.5	ND < 0.5	ND < 1.0	ND < 0.5	2.1	ND < 0.5	ND < 0.5	ND < 0.5	ND < 5.0	ND < 50	ND < 500	ND < 0.5	ND < 0.5
	1st Quarter	1/26/2004	85	ND < 0.5	ND < 0.5	ND < 1.0	ND < 0.5	0.7	ND < 0.5	ND < 0.5	ND < 0.5	ND < 5.0	ND < 50	ND < 500	ND < 0.5	ND < 0.5
	3rd Quarter	7/31/2004	ND < 50	ND < 0.5	ND < 0.5	ND < 1.0	ND < 0.5	1.6	ND < 0.5	ND < 0.5	ND < 0.5	ND < 5.0	87	ND < 500	----	----
	4th Quarter	10/31/2004	ND < 50	ND < 0.5	ND < 0.5	ND < 1.5	ND < 0.5	0.8	ND < 0.5	ND < 0.5	ND < 0.5	ND < 5.0	96	ND < 500	----	----
	1st Quarter	1/29/2005	ND < 50	ND < 0.5	ND < 0.5	ND < 1.0	ND < 0.5	ND < 1.0	ND < 0.5	ND < 5.0	ND < 5.0	ND < 50	67	99	----	----
	2nd Quarter	5/14/2005	ND < 50	ND < 0.5	ND < 0.5	ND < 1.0	ND < 0.5	ND < 1.0	ND < 0.5	ND < 0.5	ND < 0.5	ND < 50	55	61	----	----
	3rd Quarter	7/18/2005	ND < 50	ND < 0.5	ND < 0.5	ND < 1.0	ND < 0.5	ND < 1.0	ND < 0.5	ND < 0.5	ND < 0.5	ND < 50.0	ND < 50	ND < 50	----	----
	4th Quarter	10/25/2005	ND < 50	ND < 0.5	ND < 0.5	ND < 1.0	ND < 0.5	ND < 1.0	ND < 0.5	ND < 0.5	ND < 0.5	ND < 50.0	ND < 50	55	----	----
	1st Quarter	1/23/2006	ND < 50	ND < 0.5	ND < 0.5	ND < 1.0	ND < 0.5	ND < 1.0	ND < 0.5	ND < 0.5	ND < 0.5	ND < 50.0	55	68	----	----
	2nd Quarter	5/16/2006	ND < 50.0	ND < 0.5	ND < 0.5	ND < 1.0	ND < 0.5	ND < 1.0	ND < 0.5	ND < 0.5	ND < 0.5	ND < 50.0	ND < 50	ND < 50	----	----
MW-3	2nd Quarter	5/19/2002	ND < 50	ND < 0.3	ND < 0.3	ND < 0.6	ND < 0.3	ND < 2.0	ND < 0.5	ND < 0.5	ND < 0.5	ND < 40	440	ND < 50	ND < 0.5	ND < 0.5
	3rd Quarter	7/16/2002	ND < 50	ND < 0.3	ND < 0.3	ND < 0.6	ND < 0.3	2.1	ND < 0.5	ND < 0.5	ND < 0.5	ND < 100	ND < 50	ND < 50	ND < 0.5	ND < 0.5
	4th Quarter	10/14/2002	ND < 50	ND < 0.3	ND < 0.3	ND < 0.6	ND < 0.3	2.1	ND < 0.5	ND < 0.5	ND < 0.5	ND < 100	ND < 50	ND < 50	ND < 0.5	ND < 0.5
	1st Quarter	1/16/2003	ND < 50	ND < 0.5	ND < 0.5	ND < 1.0	ND < 0.5	7.5	ND < 0.5	ND < 0.5	ND < 0.5	ND < 5.0	ND < 50	ND < 500	ND < 0.5	ND < 0.5
	2nd Quarter	4/13/2003	ND < 50	ND < 0.5	ND < 0.5	ND < 1.0	ND < 0.5	0.7	ND < 0.5	ND < 0.5	ND < 0.5	ND < 5.0	ND < 50	ND < 500	----	----
	3rd Quarter	7/13/2003	ND < 50	ND < 0.5	ND < 0.5	ND < 0.5	ND < 0.5	0.6	ND < 0.5	ND < 0.5	ND < 0.5	ND < 0.5	ND < 50	ND < 500	ND < 0.5	ND < 0.5
	4th Quarter	10/22/2003	ND < 50	ND < 0.5	ND < 0.5	ND < 1.0	ND < 0.5	2.3	ND < 0.5	ND < 0.5	ND < 0.5	ND < 5.0	ND < 50	ND < 500	ND < 0.5	ND < 0.5
	1st Quarter	1/26/2004	ND < 50	ND < 0.5	ND < 0.5	ND < 1.0	ND < 0.5	0.9	ND < 0.5	ND < 0.5	ND < 0.5	ND < 5.0	ND < 50	ND < 500	ND < 0.5	ND < 0.5
	3rd Quarter	7/31/2004	ND < 50	ND < 0.5	ND < 0.5	ND < 1.0	ND < 0.5	1.2	ND < 0.5	ND < 0.5	ND < 0.5	ND < 5.0	ND < 50	ND < 500	----	----
	4th Quarter	10/31/2004	ND < 50	ND < 0.5	ND < 0.5	ND < 1.5	ND < 0.5	1.1	ND < 0.5	ND < 0.5	ND < 0.5	ND < 5.0	ND < 50	ND < 500	----	----
	1st Quarter	1/29/2005	ND < 50	ND < 0.5	ND < 0.5	ND < 1.0	ND < 0.5	ND < 1.0	ND < 0.5	ND < 5.0	ND < 5.0	ND < 50	ND < 50	ND < 50	----	----
	2nd Quarter	5/14/2005	ND < 50	ND < 0.5	ND < 0.5	ND < 1.0	ND < 0.5	ND < 1.0	ND < 0.5	ND < 0.5	ND < 0.5	ND < 50	ND < 50	ND < 50	----	----
	3rd Quarter	7/18/2005	ND < 50	ND < 0.5	ND < 0.5	ND < 1.0	ND < 0.5	ND < 1.0	ND < 0.5	ND < 0.5	ND < 0.5	ND < 50	ND < 50	ND < 50	----	----
	4th Quarter	10/25/2005	ND < 50	ND < 0.5	ND < 0.5	ND < 1.0	ND < 0.5	ND < 1.0	ND < 0.5	ND < 0.5	ND < 0.5	ND < 50	ND < 50	ND < 50	----	----
	1st Quarter	1/23/2006	ND < 50	ND < 0.5	ND < 0.5	ND < 1.0	ND < 0.5	ND < 1.0	ND < 0.5	ND < 0.5	ND < 0.5	ND < 50	ND < 50	ND < 50	----	----
	2nd Quarter	5/16/2006	ND < 50.0	ND < 0.5	ND < 0.5	ND < 1.0	ND < 0.5	ND < 1.0	ND < 0.5	ND < 0.5	ND < 0.5	ND < 50.0	ND < 50	ND < 50	----	----



**Table 4 (cont.)**  
**Groundwater Analytical Results from Monitoring Wells**  
Blue Lake 76  
291 Blue Lake Boulevard  
Blue Lake, California 95525

Sample Location	Annual Quarter	Sample Date	TPHg (ppb)	Benzene (ppb)	Toluene (ppb)	Xylenes (ppb)	Ethylbenzene (ppb)	MTBE (ppb)	DIPE (ppb)	TAME (ppb)	ETBE (ppb)	TBA (ppb)	TPHd (ppb)	TPHmo (ppb)	EDB (ppb)	EDC (ppb)
MW-4	2nd Quarter	5/19/2002	2,450	4.6	2.2	236	154	107	ND < 0.5	ND < 0.5	ND < 0.5	ND < 40	363	ND < 50	ND < 0.5	ND < 0.5
	3rd Quarter	7/16/2002	1,070	ND < 6.0	ND < 6.0	26.3	81.8	141	ND < 10	ND < 10	ND < 10	ND < 2,000	ND < 50	ND < 50	ND < 10	ND < 10
	4th Quarter	10/14/2002	535	2.0	ND < 0.3	ND < 0.6	1.8	73.6	ND < 0.5	5.0	ND < 0.5	ND < 100	538	ND < 50	ND < 0.5	ND < 0.5
	1st Quarter	1/16/2003	260	0.6	ND < 0.5	ND < 1.0	ND < 0.5	100	ND < 0.5	3.0	ND < 0.5	12	53	ND < 500	ND < 0.5	ND < 0.5
	2nd Quarter	4/13/2003	66	ND < 0.5	ND < 0.5	ND < 1.0	ND < 0.5	25	ND < 0.5	0.7	ND < 0.5	ND < 5.0	ND < 50	ND < 500	----	----
	3rd Quarter	7/13/2003	ND < 50	ND < 0.5	ND < 0.5	ND < 0.5	ND < 0.5	17	ND < 0.5	ND < 0.5	ND < 0.5	ND < 0.5	ND < 50	ND < 500	ND < 0.5	ND < 0.5
	4th Quarter	10/22/2003	430	ND < 0.5	ND < 0.5	ND < 1.0	ND < 0.5	68	ND < 0.5	ND < 0.5	ND < 0.5	ND < 5.0	76	ND < 500	ND < 0.5	ND < 0.5
	1st Quarter	1/26/2004	71	ND < 0.5	ND < 0.5	ND < 1.0	ND < 0.5	22	ND < 0.5	0.8	ND < 0.5	ND < 5.0	ND < 50	ND < 500	ND < 0.5	ND < 0.5
	2nd Quarter	4/28/2004	51	ND < 0.5	ND < 0.5	ND < 1.0	ND < 0.5	15	ND < 0.5	0.5	ND < 0.5	ND < 5.0	ND < 50	ND < 500	ND < 0.5	ND < 0.5
	3rd Quarter	7/31/2004	140	ND < 0.5	ND < 0.5	ND < 1.0	ND < 0.5	28	ND < 0.5	1.4	ND < 0.5	ND < 5.0	110	ND < 500	----	----
	4th Quarter	10/31/2004	100	ND < 0.5	ND < 0.5	1.3	0.5	76	ND < 0.5	3.5	ND < 0.5	ND < 5.0	82	ND < 500	----	----
	1st Quarter	1/29/2005	ND < 50	ND < 0.5	ND < 0.5	ND < 1.0	ND < 0.5	23.3	ND < 0.5	ND < 5.0	ND < 5.0	ND < 50	ND < 50	ND < 50	----	----
	2nd Quarter	5/14/2005	ND < 50	ND < 0.5	ND < 0.5	ND < 1.0	ND < 0.5	12.2	ND < 0.5	ND < 0.5	ND < 0.5	ND < 50	ND < 50	ND < 50	----	----
	3rd Quarter	7/18/2005	ND < 50	ND < 0.5	ND < 0.5	ND < 1.0	ND < 0.5	8.3	ND < 0.5	ND < 0.5	ND < 0.5	ND < 50	ND < 50	ND < 50	----	----
	4th Quarter	10/25/2005	ND < 50	ND < 0.5	ND < 0.5	ND < 1.0	ND < 0.5	47.0	ND < 0.5	2.0	ND < 0.5	ND < 50	115*	103*	----	----
	1st Quarter	1/23/2006	ND < 50	ND < 0.5	ND < 0.5	ND < 1.0	ND < 0.5	15.9	ND < 0.5	0.5	ND < 0.5	ND < 50	ND < 50	ND < 50	----	----
	2nd Quarter	5/16/2006	ND < 50.0	ND < 0.5	ND < 0.5	ND < 1.0	ND < 0.5	7.6	ND < 0.5	ND < 0.5	ND < 0.5	ND < 50.0	51	ND < 50	----	----
DW-1	1st Quarter	1/16/2003	16,000	39	11	460	130	180	----	----	----	----	2,500	----	----	----
	2nd Quarter	4/13/2003	4,200	25	5.1	239	31	130	----	----	----	----	2,200	----	----	----
	3rd Quarter	7/13/2003	10,000	46	10	416	190	480	----	----	----	----	3,200	----	----	----
	4th Quarter	10/22/2003	5,200	29	ND < 5.0	218	39	880	----	----	----	----	1,200	----	----	----
	1st Quarter	1/26/2004	5,500	19	ND < 5.0	152	ND < 5.0	79	----	----	----	----	ND < 50	----	----	----
	2nd Quarter	4/28/2004	7,300	21	ND < 5.0	128	55	100	----	----	----	----	3,000	----	----	----
	3rd Quarter	7/31/2004	5,200	23	3.9	168	55	580	----	----	----	----	3,300	----	----	----
	4th Quarter	10/31/2004	4,400	25	5.0	175	50	160	ND < 5.0	ND < 5.0	5.8	ND < 50	2,300	ND < 500	----	----
	1st Quarter	1/29/2005	1,120	9.3	2.2	53.5	32.0	47.5	ND < 0.5	ND < 5.0	ND<5.0	ND<50	1,780	ND < 50	----	----
	3rd Quarter	9/5/2005	1,640	9.8	2.0	46.2	15.9	380	ND < 1.2	4.6	16.3	ND < 125	3,580	1,040	----	----

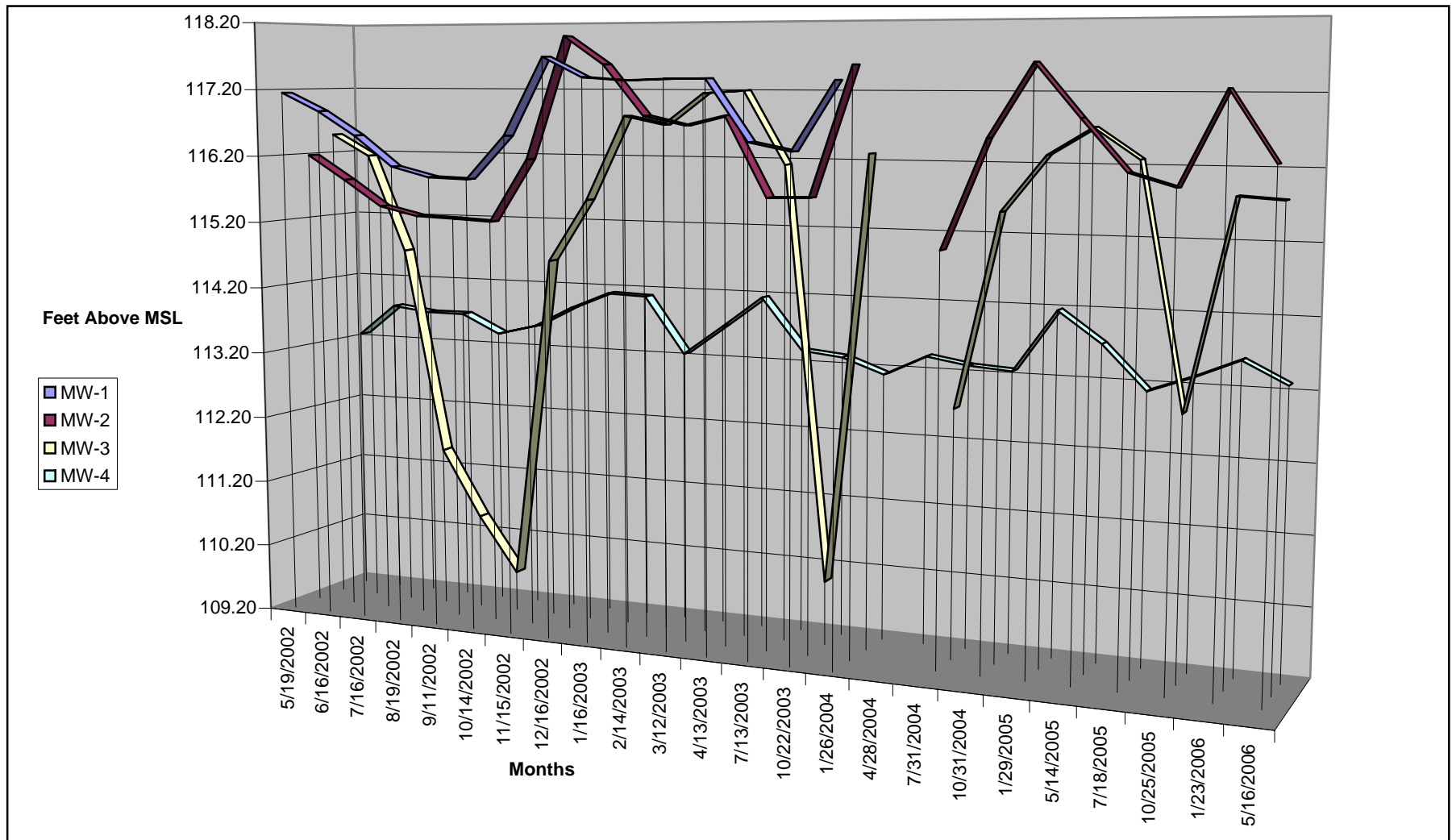
**Notes:**

TPHg: Total petroleum hydrocarbons as gasoline  
MTBE: Methyl tertiary butyl ether  
DIPE: Diisopropyl ether  
TAME: Tertiary amyl methyl ether  
TPHd: Total petroleum hydrocarbons as diesel  
EDB: 1,2-Dibromoethane  
EDC: 1,2-Dichloroethane

TBA: Tertiary butanol  
ETBE: Ethyl tertiary butyl ether  
TPHmo: Total petroleum hydrocarbons as motor oil  
ppb: parts per billion = µg/l = .001 mg/l = 0.001 ppm  
ND: Not detected. Sample was detected at or below the method detection limit as shown.  
NT: Not tested.

# Chart 1 Hydrograph

Blue Lake 76  
291 Blue Lake Boulevard  
Blue Lake, California 95525



# Appendices

# **Appendix A**



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voice 530.243.7234

fax 530.243.7494

2218 Railroad Avenue

Redding, California 96001

June 01, 2006

**Lab ID: 6050700**

Andy Malone  
SOUNPACIFIC  
4612 GREENWOOD HEIGHTS DR  
KNEELAND, CA 95549  
RE: BLUE LAKE 76 SP-110

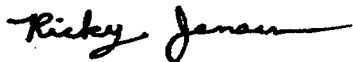
Dear Andy Malone,

Enclosed are the analysis results for Work Order number 6050700. All analysis were performed under strict adherence to our established Quality Assurance Plan. Any abnormalities are listed in the qualifier section of this report.

If you have any questions regarding these results, please feel free to contact us at any time. We appreciate the opportunity to service your environmental testing needs.

Sincerely,

  
For



Ricky D. Jensen  
Laboratory Director

California ELAP Certification Number 1677



basic  
laboratory

www.basiclab.com

voice 530.243.7234 2218 Railroad Avenue  
fax 530.243.7494 Redding, California 96001

**Report To:** SOUNPACIFIC  
4612 GREENWOOD HEIGHTS DR  
KNEELAND, CA 95549

**Attention:** Andy Malone

**Project:** BLUE LAKE 76 SP-110

**Lab No:** 6050700  
**Reported:** 06/01/06  
**Phone:** 707-269-0884  
**P.O. #**

**Volatile Organic Compounds**

Analyte	Units	Results	Qualifier	MDL	RL	Method	Analyzed	Prepared	Batch
<b>MW-2 Water (6050700-01) Sampled:05/16/06 00:00 Received:05/18/06 11:03</b>									
Gasoline	ug/l	ND			50.0	EPA 8015/8260	05/19/06	05/19/06	B6E0512
Benzene	"	ND			0.5	"	"	"	"
Toluene	"	ND			0.5	"	"	"	"
Ethylbenzene	"	ND			0.5	"	"	"	"
Xylenes (total)	"	ND			1.0	"	"	"	"
Methyl tert-butyl ether	"	ND			1.0	"	"	"	"
Di-isopropyl ether	"	ND			0.5	"	"	"	"
Tert-amyl methyl ether	"	ND			0.5	"	"	"	"
Ethyl tert-butyl ether	"	ND			0.5	"	"	"	"
Tert-butyl alcohol	"	ND			50.0	"	"	"	"
Surrogate: 4-Bromofluorobenzene		95.6 %		43-155		"	"	"	"
<b>MW-3 Water (6050700-02) Sampled:05/16/06 00:00 Received:05/18/06 11:03</b>									
Gasoline	ug/l	ND			50.0	EPA 8015/8260	05/19/06	05/19/06	B6E0512
Benzene	"	ND			0.5	"	"	"	"
Toluene	"	ND			0.5	"	"	"	"
Ethylbenzene	"	ND			0.5	"	"	"	"
Xylenes (total)	"	ND			1.0	"	"	"	"
Methyl tert-butyl ether	"	ND			1.0	"	"	"	"
Di-isopropyl ether	"	ND			0.5	"	"	"	"
Tert-amyl methyl ether	"	ND			0.5	"	"	"	"
Ethyl tert-butyl ether	"	ND			0.5	"	"	"	"
Tert-butyl alcohol	"	ND			50.0	"	"	"	"
Surrogate: 4-Bromofluorobenzene		96.0 %		43-155		"	"	"	"
<b>MW-4 Water (6050700-03) Sampled:05/16/06 00:00 Received:05/18/06 11:03</b>									
Gasoline	ug/l	ND			50.0	EPA 8015/8260	05/19/06	05/19/06	B6E0512
Benzene	"	ND			0.5	"	"	"	"
Toluene	"	ND			0.5	"	"	"	"
Ethylbenzene	"	ND			0.5	"	"	"	"
Xylenes (total)	"	ND			1.0	"	"	"	"
Methyl tert-butyl ether	"	7.6			1.0	"	"	"	"
Di-isopropyl ether	"	ND			0.5	"	"	"	"
Tert-amyl methyl ether	"	ND			0.5	"	"	"	"
Ethyl tert-butyl ether	"	ND			0.5	"	"	"	"
Tert-butyl alcohol	"	ND			50.0	"	"	"	"
Surrogate: 4-Bromofluorobenzene		91.2 %		43-155		"	"	"	"

  
Approved By

Basic Laboratory, Inc.  
California D.O.H.S. Cert #1677



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**Report To:** SOUNPACIFIC  
4612 GREENWOOD HEIGHTS DR  
KNEELAND, CA 95549

**Attention:** Andy Malone

**Project:** BLUE LAKE 76 SP-110

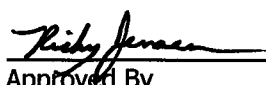
**Lab No:** 6050700  
**Reported:** 06/01/06  
**Phone:** 707-269-0884  
**P.O. #**

**TPH Diesel & Motor Oil**

Analyte	Units	Results	Qualifier	MDL	RL	Method	Analyzed	Prepared	Batch
<b>MW-2 Water (6050700-01) Sampled:05/16/06 00:00 Received:05/18/06 11:03</b>									
Diesel	ug/l	ND			50	EPA 8015 MOD	05/22/06	05/22/06	B6E0518
Motor Oil	"	ND			50	"	"	"	"
Surrogate: Octacosane		86.7 %		50-150		"	"	"	"
<b>MW-3 Water (6050700-02) Sampled:05/16/06 00:00 Received:05/18/06 11:03</b>									
Diesel	ug/l	ND			50	EPA 8015 MOD	05/22/06	05/22/06	B6E0518
Motor Oil	"	ND			50	"	"	"	"
Surrogate: Octacosane		87.6 %		50-150		"	"	"	"
<b>MW-4 Water (6050700-03) Sampled:05/16/06 00:00 Received:05/18/06 11:03</b>									
Diesel	ug/l	51			50	EPA 8015 MOD	05/22/06	05/22/06	B6E0518
Motor Oil	"	ND			50	"	"	"	"
Surrogate: Octacosane		89.4 %		50-150		"	"	"	"

**Notes and Definitions**

DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the detection limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
<	Less than reporting limit
≤	Less than or equal to reporting limit
>	Greater than reporting limit
≥	Greater than or equal to reporting limit
MDL	Method Detection Limit
RL/ML	Minimum Level of Quantitation
MCL/AL	Maximum Contaminant Level/Action Level
mg/kg	Results reported as wet weight
TTLC	Total Threshold Limit Concentration
STLC	Soluble Threshold Limit Concentration
TCLP	Toxicity Characteristic Leachate Procedure

  
Approved By

Basic Laboratory, Inc.  
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## **Appendix B**



# **Standard Operating Procedures**

## **Groundwater Level Measurements and Free Phase Hydrocarbon Measurements**

All SounPacific staff and contractors shall adopt the following procedures any time that groundwater elevations are determined for the purposes of establishing groundwater gradient and direction, and prior to any sampling event.

Wells are to be tested for free phase hydrocarbons (free product) before the first development or sampling of any new well, and in any well that has historically contained free product.

### **Equipment Checklist**

- ☐ Combination water level / free phase hydrocarbon indicator probe (probe)
- ☐ Gauging Data / Purge Calculations Sheet
- ☐ Pencil or Pen/sharpie
- ☐ Disposable Gloves
- ☐ Distilled Water and or know water source on site that is clean
- ☐ Alconox (powder) or Liquinox (liquid) non-phosphate cleaners—do not use soap!
- ☐ Buckets or Tubs for decontamination station
- ☐ Tools necessary to access wells
- ☐ Site Safety Plan
- ☐ This Standard Operating Procedure
- ☐ Notify Job site business that you will be arriving to conduct work.

### **Procedure**

1. Review Site Safety Plan and utilize personal protection appropriate for the contaminants that may be encountered.
2. Access and open all monitoring wells to be measured. Allow wells to equilibrate for approximately 15 minutes before taking any measurements.

3. Decontaminate probe with Alconox or Liquinox solution, and rinse with distilled water.
4. Determine the diameter of the well to be measured and indicate this on the Gauging Data / Purge Calculations Sheet.
5. Words of caution: Please be careful with water level and product meters probes are not attached with high strength material so please make sure to avoid catching the end on anything in the well and make sure not to wind reel to the point that it could pull on the probe. ***If product is suspect in a well, go to step 6, if no product is suspected go to step 7 below.***
6. **When product is present or suspected:** use the product level meter. Clip the static charge clamp to the side of the well casing. Then lower probe into the well through the product/water interface about one foot if possible. Then slowly raise the probe back up through the product/water interface layer and record the level as the tone changes from solid to broken-record this level in the Gauging Data / Purge Calculations Sheet to the nearest 0.01 foot (DTP). Continue to raise the probe up through the product until the tone stops completely-record this level on the Gauging Data / Purge Calculations Sheet to the nearest 0.01 foot (DTW). Then go to step 8.
7. **When no product is present or suspected:** If no free product is present, record the depth of the water (to the nearest 0.01 foot) relative to the painted black mark on the top of the well casing. Leave the probe in the well just a hair above the water level to ensure the well as equilibrated. As the well rises, the tone will sound. Make sure no increase in water levels have occurred in over a ten-minute period. Water levels can lower as well as rise. Make sure you note when the level you keep lowering the probe to has remained stable for at least ten minutes. Once this has been accomplished, please record this level in the Gauging Data / Purge Calculations Sheet to the nearest 0.01 foot (DTW).
8. Turn off the probe, and use the probe to determine the depth to the bottom of the well relative to the top of the well casing. This is the depth to bottom measurement (DTB).
9. Decontaminate probe and tape by washing in an Alconox/Liquinox solution (***read directions on solution for ratio of water to cleanser***) and use the toothbrush provided to remove any foreign substance from the probe and tape. Then triple rinse probe and tape with clean water and then proceed to take measurements in the next well.
10. If sampling is to occur, proceed to implement SounPacific's Standard Operating Procedure for Monitoring Well Purging and Sampling. If no sampling is to be performed, close and secure all wells and caps.



## Standard Operating Procedures

### Monitoring Well Purging and Groundwater Sampling

All SounPacific employees and contractors shall adopt the following procedures any time that groundwater samples are to be taken from an existing groundwater monitoring well.

Prior to the implementation of these procedures, the groundwater level **MUST** be measured and the presence of free phase hydrocarbons determined in accordance with SounPacific's Standard Operating Procedures for Groundwater Level Measurements and Free Phase Hydrocarbon Measurements.

### Equipment Checklist

- ☐ Gauging Data / Purge Calculations Sheet used for water level determination
- ☐ Chain of Custody Form
- ☐ pH/ Conductivity / Temperature meter
- ☐ Pencil or Pen
- ☐ Indelible Marker
- ☐ Calculator
- ☐ Disposable Gloves
- ☐ Distilled Water
- ☐ Alconox/liquinox liquid or powdered non-phosphate cleaner
- ☐ Buckets or Tubs for decontamination station
- ☐ Bottom-filling bailer or pumping device for purging
- ☐ Disposable bottom-filling bailer and emptying device for sampling
- ☐ String, twine or fishing line for bailers
- ☐ Sample containers appropriate for intended analytical method (check with lab)
- ☐ Sample labels
- ☐ Site Safety Plan
- ☐ Tools necessary to access wells
- ☐ Drum space on site adequate for sampling event

### **Procedure**

1. Review Site Safety Plan and utilize personal protection appropriate for the contaminants that may be encountered.
2. Measure groundwater levels and check for the presence of free product in accordance with the Standard Operating Procedures for Groundwater Level Measurements and Free Phase Hydrocarbon Measurements.

### **Purging**

3. Calculate and record the volume of standing water in each well using the information provided on the Gauging Data / Purge Calculations sheet.  
 $(DTB-DTW) \times \text{Conversion Factor} = \text{Casing Volume}.$
4. The purge volume shall be at least three times and no more than seven times the volume of standing water (the casing volume).
5. Purge the well by bailing or pumping water from the well into a calibrated receptacle, such as a five gallon bucket or tub with markings to indicate one gallon increments. Collect purgeate in a 55 gallon labeled drum and store on site. Drum labels should include the date, contents, site number, and SounPacific's name and telephone number.
6. Take measurements of pH, conductivity, temperature, and visual observations to verify the stabilization of these parameters. At least five measurements of these parameters should be made throughout the purging process. The parameters shall be considered stabilized if successive measurements vary by less than 0.25 pH units, 10% of conductivity in  $\mu\text{S}$ , and  $1^{\circ}\text{C}$  (or  $1.8^{\circ}\text{F}$ ). Continue purging until at least three times the casing volume has been removed, and the measured parameters have stabilized as indicated above. Do not exceed seven casing volumes.
7. Take a final depth to groundwater measurement and calculate the casing volume of the recharged well. Ideally, the casing volume should have recharged to at least 80% of the original measured casing volume before sampling commences. If due to slow recharge rates it is not feasible to wait for the well to fully recharge, then note this on the Gauging Data / Purge Calculation Sheet and proceed to sample following the procedure below.

## **Sampling**

8. **After completing groundwater measurement, and checking for free product if necessary, in accordance with SounPacific's Standard Operating Procedures for Groundwater Level Measurements and Free Phase Hydrocarbon Measurements, and after purging monitoring wells as described above, groundwater samples may be collected.**
9. Slowly lower a clean, previously unused disposable bailer into the well water approximately half of the bailer length, and allow the bailer to slowly fill.
10. Withdraw the full bailer from the monitoring well and utilize the included (clean and unused) bottom-emptying device to fill the necessary sample containers, and seal the container with the included PTFE (Teflon) lined cap.
11. When filling VOAs, fill the VOA completely full, with the meniscus rising above the rim of the bottle. Carefully cap the VOA and invert it and gently tap it to determine whether air bubbles are trapped inside. If the VOA contains air bubbles, refill the VOA and repeat this step.
12. All samples shall be labeled with the Sample ID, the Sample Date, and the Sample Location or Project Number. Use an indelible marker for writing on sample labels.
13. Record all pertinent sample data on the Chain of Custody.
14. Place samples in an ice chest cooled to 4°C with ice or "blue ice". Bottles should be wrapped in bubble wrap, and VOA's should be inserted in a foam VOA holder to protect against breakage. Samples are to be kept at 4°C until delivered to the laboratory. Any transference of sample custody shall be indicated on the Chain of Custody with the appropriate signatures as necessary.
15. Utilize clean, previously unused gloves, bailer and line, and bottom-emptying device for each well sampled.
16. When finished with all sampling, close and secure all monitoring wells.
17. Leave the site cleaner than when you arrived and drive safely.

# **Appendix C**

## GAUGING DATA/PURGE CALCULATIONS

Job Site: Blue Lake 76Job No.: SP-110Event: 16th DMSDate: 5-16-06

WELL NO.	DIA. (in.)	DTB (ft.)	DTW (ft.)	ST (ft.)	CV (gal.)	PV (gal.)	SPL (ft.)	Bailer Loads	Notes
MW-2	2	18.11	8.6	9.51	155	48			Muddy
MW-3	2	19.23	9.45	9.78	1.6	48			Very Slow Recharge
MW-4	2	19.41	10.77	8.64	1.4	42			Slow Recharge
									w/ one half full drum

## Explanation:

DIA = Well Diameter

DTB = Depth to Bottom

DTW = Depth to Water

ST = Saturated Thickness (DTB-DTW)

CV = Casing Volume (ST x cf)

PV = Purge Volume (standard 3 x CV,  
well development 10 x CV)

SPL = Thickness of Separate Phase Liquid

## Conversion Factors (cf):

2 in. dia. well cf = 0.16 gal./ft.

4 in. dia. well cf = 0.65 gal./ft.

6 in. dia. well cf = 1.44 gal./ft.

Sampler:

Tien-yu Tai

T0602300385



## Well Gauging/Sampling Report

Sheet 1 of 3

Date: <u>5-16-06</u>		Project Name: <u>Blue Lake 76</u>		Project No: <u>SP-110</u>		Well Number: <u>MW-2</u>	
Analyses Tested: <u>TPHg, BTxE, 5-Oxys, TPtd, TPHmo</u>							
Sample Containers: <u>3 HIL Vials, 2 1-L Bottles</u>							
Purge Technique:		<input type="checkbox"/> Bailor		<input checked="" type="checkbox"/> Pump			
Sounding Used:		<input type="checkbox"/> Water Meter		<input checked="" type="checkbox"/> Interface Meter			
Water & Free Product Levels							
Time	Depth to Water	Depth to Product	Notes				
1:01 pm	8.6		No Sheen				
1:11 pm	8.6		Sheen				
	End						
Field Measurements							
Time	Total Vol. Removed (gal)	pH	Temp (F)	Cond. (µs/cm)	DO (mg/L)	DO (%)	
1:37 pm	0	5.45	58.65	0.122	1.13	11.2	
1:46	1.6	5.51	57.70	0.116	0.51	5.0	
1:52	3.2	5.86	57.68	0.136	0.45	4.4	
1:55	4.8	5.80	57.66	0.130	0.70	6.9	
Field Scientist: <u>Tien-yu Tai</u>							

## Well Gauging/Sampling Report

Sheet 2 of 3

Date: <u>5-16-06</u>		Project Name: <u>Blue Lake 76</u>		Project No: <u>SP-110</u>		Well Number: <u>14W-3</u>	
Analyses Tested: <u>TPHg, BTxE, 5-Oxyc, TPHd, TPHmo</u>							
Sample Containers: <u>3 HIL VOAC, 2 1-L Bottles</u>							
Purge Technique:		<input type="checkbox"/> Bailor		<input checked="" type="checkbox"/> Pump			
Sonder Used:		<input type="checkbox"/> Water Meter		<input checked="" type="checkbox"/> Interface Meter			
Water & Free Product Levels							
Time	Depth to Water	Depth to Product	Notes				
1:08 pm	9.61 ft		No Sheen				
2:15	9.45 ft		Sheen				
2:21	9.45						
	End						
Field Measurements							
Time	Total Vol. Removed (gal)	pH	Temp (F)	Cond. (ms/cm)	DO (mg/L)	DO (%)	
2:45 pm	0	6.64	59.52	0.219	0.29	2.9	
2:49	1.6	6.50	58.94	0.215	0.40	4.0	
2:54	3.2	6.40	59.34	0.221	0.80	8.1	
2:59	4.8	6.44	59.75	0.223	0.46	4.6	
Field Scientist: <u>Tien-yu Tai</u>							

## Well Gauging/Sampling Report

Sheet 3 of 3

Date: <u>5-16-06</u>		Project Name: <u>Blue Lake 76</u>		Project No: <u>SP-110</u>		Well Number: <u>MW-4</u>	
Analyses Tested: <u>TPHg, BTxE, 5-Oxyc, TPHd, TPHmo</u>							
Sample Containers: <u>3 HIR VOAs, 2 1-L Bottles</u>							
Purge Technique:		<input type="checkbox"/> Bailor		<input checked="" type="checkbox"/> Pump			
Sonde Used:		<input type="checkbox"/> Water Meter		<input checked="" type="checkbox"/> Interface Meter			
Water & Free Product Levels							
Time	Depth to Water	Depth to Product	Notes:				
<u>1:04 pm</u>	<u>10.88</u>		<u>No Sheen</u>				
<u>1:34</u>	<u>10.77</u>		<u>Sheen</u>				
<u>1:40</u>	<u>10.77</u>						
	<u>End</u>						
Field Measurements							
Time	Total Vol. Removed (gal)	pH	Temp (F)	Cond. (mc/cm)	DO (mg/L)	DO (%)	
<u>2:12 pm</u>	<u>0</u>	<u>6.19</u>	<u>60.52</u>	<u>0.611</u>	<u>0.41</u>	<u>4.1</u>	
<u>2:17</u>	<u>1.4</u>	<u>6.31</u>	<u>60.48</u>	<u>0.572</u>	<u>0.54</u>	<u>5.5</u>	
<u>2:24</u>	<u>2.8</u>	<u>6.41</u>	<u>60.43</u>	<u>0.590</u>	<u>0.43</u>	<u>4.3</u>	
<u>2:29</u>	<u>4.2</u>	<u>6.41</u>	<u>60.86</u>	<u>0.626</u>	<u>0.79</u>	<u>8.0</u>	
Field Scientist: <u>Tien-yu Tai</u>							